IPTC Standards

NewsML™ G2

Specification Version 2.4
Core Conformance Level

Document Revision 1

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Acknowledgements

About the Standard

Specification Versioning History

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1	2009-09-04	Michael Steidl	

About this Document

This document specifies the IPTC news exchange standard NewsML-G2 which is a conceptual and processing model making freely available the IPTC knowledge of the most effective ways to structure, describe, manage and exchange general news.

Status of this Document

This document is under the governance of the IPTC NewsML-G2 Working Group (NewsML-G2 WG) of the IPTC G2-Standards Working Party (G2S WP).

This is a specification document which was endorsed by the IPTC members and may be updated, replaced or obsoleted by other documents at any time.

Public versions of this document and of related IPTC documents are available at:

http://www.iptc.org/std/NewsML-G2/2.4/

Public comments should be sent to the forum and mailing list at:

http://tech.groups.yahoo.com/group/newsml-g2

A page with all errata not covered by the latest version of the NewsML-G2 specification is available at:

http://www.iptc.org/goto?NewsML-G2-Errata

The Full Set of Specification Documents

The full set of specification documents for NewsML-G2 2.4 consists of (file names are added, # is to be substituted by the most current document revision number):

This Specification document - NewsML-G2_2.4-spec-CCL_#.pdf

XML Schema files applicable to the Core Conformance Level (see **Conformance Levels** on page 11):

- ♦ NewsML-G2_2.4-spec-NewsItem-Core_#.xsd

- ♦ NAR_1.5-spec-PackageItem-Core_#.xsd

- ♦ NAR_1.5-spec-ConceptItem-Core_#.xsd

- ♦ NAR_1.5-spec-KnowledgeItem-Core_#.xsd

- ♦ NAR_1.5-spec-Framework-Core_#.xsd

XML Schema files applicable to the Power Conformance Level (see **Conformance Levels** on page 11):

- ♦ NewsML-G2_2.4-spec-NewsItem-Power_#.xsd

- ♦ NAR_1.5-spec-PackageItem-Power_#.xsd

- ♦ NAR_1.5-spec-ConceptItem-Power_#.xsd

- ♦ NAR_1.5-spec-KnowledgeItem-Power_#.xsd

- ♦ NAR_1.5-spec-Framework-Power_#.xsd

All files above can be obtained from:

http://www.iptc.org/std/NewsML-G2/2.4/specification/

Note on the XML Schema File Names

XML Schemas are revised for two reasons:

- ♦ The NewsML-G2 specifications have been changed: this results in an new version of the standard, this will be reflected by a new path to files and a new standard version number like NewsML-G2_2.5

- ♦ The XML Schema has been edited a) to fix errors and b) to change non-normative parts, like the wording of an element's annotation: this is reflected by a new revision number at the end of the file name like the "8" in NewsML-G2_2.4-spec-Framework-Core_8.xsd.

The XML Schema files without the document revision number (e.g. "_8") at the end of the file name are true copies of the latest document revision. This allows applying a persistent reference to the latest XML Schema file version regardless of any edits of the document.

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Contents

1 Introduction to NewsML-G2

NewsML™ is a media-independent news exchange format for general news.

News exchange is a method of moving around not only the core news content, but also data that describe the content in an abstract way (i.e. metadata), information about how to handle news in an appropriate way (i.e.news management data), information about the packaging of news information, and finally information about the technical transfer itself.

1.1 History

The initial version of NewsML, version 1.0, was approved in October 2000. Since then it went along with minor revisions: version 1.1 was approved in October 2002; version 1.2 was approved in October 2003.

In 2004, the user-experience with NewsML was evaluated, and it was decided to create a consistent set of complementary standards as a comprehensive and interoperable way to move all types of data between media systems in order to make news exchange efficient and reliable. This set of standards is now the IPTC family of G2-Standards, and NewsML-G2 is a member of it.

The family of IPTC G2-Standards is built on a common structural and function framework called the IPTC News Architecture (NAR). For this reason many components of NewsML-G2 are common with other members of the G2-Standards, like e.g. EventsML-G2.

To better understand the terminology used in the G2-Standards specifications we recommend the **Glossary** (page 186) as a reference, as it provides an extensive set of terms and their definitions.

The NewsML-G2 Specification builds on:

♦ The NewsML 2 Business Requirements [NML-BR],

♦ The IPTC-G2 News Architecture Core Model [NAR-CM],

♦ The IPTC-G2 News Architecture Power Extensions Model [NAR-PM].

1.2 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 conformance level" (CCL) and "power conformance level" (PCL). The core conformance level is focused on simplicity and interoperability. The power conformance level is a superset of the core conformance level which gives more flexibility to providers who choose it, but the recipient processors are more complex to program to comply with PCL and interoperability is lower than for CCL as not all recipients will implement the power level.

A compliant processor must therefore assert supporting either "core" or "power" functionality.

As the "power" features are only an extension of the "core" features, a "core" compliant processor SHOULD process "power" Items by simply ignoring the information pertaining to the "power" level.

2 Representing News - newsItem

An XML Schema file corresponding to the specifications for this item is available (see **The Full Set of Specification Documents** on page 3).

2.1 Description

A newsItem aims to convey news with the sense of the reporting of a newsworthy event or fact. Its content is gathered by journalists, presented with a journalistic style, and updated according to the progression of the story.

Examples of newsItems are a news report, a picture, a graphical illustration of some event, a video clip or an illustrated biography.

Typical characteristics of a newsItem are:

♦ Its content may be of any media type or format, e.g., the thumbnail, preview and high definition renditions of a picture.

♦ It can also convey more structured news information, e.g., information about companies, sports events and general events, in instances when this information is related to an event or fact.

♦ Its content is of short term interest: newsItems are volatile, and interest in them fades as time passes ("nothing is older than yesterday's news").

♦ It is expressed via a set of alternative renditions of some media content.

♦ It will usually be updated only for a short period of time, as long as the covered event evolves, and then may be archived.

♦ It refers to an arbitrary set of concepts and entities.

♦ It may be associated with other newsItems or Web resources via typed links.

2.2 Indication of Compliance with a Standard and Conformance Level

The IPTC **newsItem** (page 119) *standard* attribute MUST be set to "NewsML-G2".

The schema version to which the newsItem conforms MUST be indicated as an attribute. The current version is identified by the string "2.0".

The IPTC conformance level to which the newsItem conforms in this specification MAY be indicated by the value "core", which is the default value for this attribute.

Sample:

```
<newsItem standard="NewsML-G2" standardversion="2.0"
        xmlns="http://iptc.org/std/nar/2006-10-01/" >
</newsItem>
```

2.3 Identification and Versioning

It is possible to positively identify a newsItem as it moves through the news workflow and is transferred from place to place and from system to system.

A newsItem MUST have a *guid* attribute, which is a persistent and globally unique identifier. The guid is required to be in the form of an IRI. Any IRI capable of acting as a globally unique identifier is accepted.

Note: The IPTC will provide the newsml-URN for this purpose, specified by a successor of RFC-3085.

A newsItem MAY have a *version* attribute, and this version MUST be incremented when the content of the Item is updated. The first version MUST be numbered 1: if the version is not explicitly set, this value must be assumed by the recipient of the Item.

The *standardversion* attribute must reflect the version of the standard as it is implemented by the corresponding XML Schema.

Sample:

```
<newsItem standard="NewsML-G2" standardversion="2.0"
      guid="urn:newsml:iptc.org:20071231:sample" version="2"
      xmlns="http://iptc.org/std/nar/2006-10-01/" >
</newsItem>
```

2.4 Catalog of Controlled Vocabularies

NewsML-G2 recommends the use of controlled values for most properties. Each news provider is free to use their own taxonomies of subjects, genres, geopolitical areas, organisations etc., and to use any value scheme it decides in the Items it provides. A provider must therefore indicate the list of the schemes he is using.

Cataloguing information MUST be included at the top of each Item.

A **catalog** (page 44) is defined as a set of scheme declarations in use by a news provider for a given Item.

Due to the large number of schemes potentially used in a single Item, and knowing that bandwidth is very important to the News industry, the catalog may be stored remotely (see **catalogRef** on page 138).

A remote catalog MUST have a *href* attribute which contains the URI of a remote catalog. A remote catalog takes the form of an XML file with a catalog element as root.

The URI of a remote catalog acts both as a locator and a global identifier, therefore:

♦ The URI of a remote catalog MUST NOT be relative.

♦ If a remote catalog is functionally changed, the URI used to access it MUST be changed. Functional changes are:

  ● the addition or removal of a scheme declaration,

  ● a change to a scheme alias,

  ● a change to a scheme URI.

One or more additional title for a catalog or catalogRef MAY be provided in different languages and variants.

As some required properties take a QCode as a value, at least one catalog or remoteCatalog MUST be present.

In general, a given provider will define a unique catalog of all used schemes, store it in a central repository and reference it from all Items it provides. A provider MAY declare several catalogs in the same Item. This may be especially useful for an aggregator which uses property values from different sources, but requires a way to avoid scheme alias clashes. In this case, catalog and remote catalog elements MAY appear in any order, and their order is not relevant.

Detailed information on the structure of catalogs and their processing is given in **Dealing with Controlled Values** (page 26).

Sample:

```
<newsItem  standard="NewsML-G2" standardversion="2.0"
      guid="urn:newsml:iptc.org:20071231:sample" version="2" xmlns="http://
      iptc.org/std/nar/2006-10-01/" >
      <catalogRef href="http://aprovider.com/cv/newsml-g2-catalog-4.xml"/>
      ....
</newsItem>
```

2.5 Rights Information

The content of a newsItem is bound to a set of copyrights and licensing information.

A **rightsInfo** (page 142) wrapper element acts as a container for a set of properties related to rights, which offer a basic expression of the copyright and usage conditions associated with an Item.

This set is limited to an **accountable** (page 37) person, a **copyrightHolder** (page 60) and a set of **copyrightNotice** (page 61) elements and **usageTerms** (page 153).

The order of the properties is flexible: The non-repeatable properties MUST come first, then the repeatable properties MAY be inserted in any order.

Further this can be the *partid* of a partMeta component. Each provider may add a set of metadata properties which have to be defined in a non-IPTC-G2 namespace. See also **XML Namespaces** (page 33) and **Extension Points in XML** (page 34).

2.6 Item Metadata

Such information is wrapped in the itemMeta wrapper element and split between news management metadata and Item links.

2.6.1 Management Metadata

Management metadata is bound to the Item as a whole and reflects its processing in a professional workflow.

The order of the properties in this set is imposed by the W3C XML schema.

Table 1. Item Management Group Elements

Element Title	Element Name	Card	Described on Page
Item Class	**itemClass**	(1)	102
Content Provider	**provider**	(1)	57
Date Item Version Created	**versionCreated**	(1)	70
Date Item First Created	**firstCreated**	(0..1)	69
Date Item Embargo Ends	**embargoed**	(0..1)	68
Publish Status	**pubStatus**	(0..1)	134
Role in the Workflow	**role**	(0..1)	143
File Name	**filename**	(0..1)	87
Editorial Service	**service**	(0..unbounded)	81
Item Title	**title**	(0..unbounded)	106
Editorial Note	**edNote**	(0..unbounded)	80

The IPTC provides a mandatory standardised scheme applicable to the **itemClass** (page 102) property of a newsItem, identified by the URI http://cv.iptc.org/newscodes/ninature/.

Each provider may add a set of metadata properties which have to be defined in a non-IPTC-G2 namespace. See also **XML Namespaces** (page 33) and **Extension Points in XML** (page 34).

2.6.2 Processing the Publish Status of an Item

The IPTC makes these values normative for the exchange of Items between a provider and its customers:

♦ Usable: The Item MAY be published without restriction.

♦ Withheld: Until further notice, the Item MUST NOT be published or used under any circumstances. If the Item has been published the publisher MUST take immediate action to withdraw or retract it.

♦ Canceled: The Item MUST NOT be published or used under any circumstances. If the Item has been published the publisher MUST take immediate action to withdraw or retract it.

Embargoes are managed by the **embargoed** (page 68) property. At the level of the data model the embargoed element could be linked now to an **edNote** (page 80) element if the existing embargoed is empty (<embargoed />).

Details are described in the Processing model below

2.6.2.1 State Transition Diagram

This depicts the state transition diagram reflecting the ways in which the **pubStatus** (page 134) values are intended to be used. Thus, upon creation of an Item, allowed statuses are usable and withheld. It is possible to withhold a usable document; it is possible to release a withheld document; it is possible to cancel a usable or withheld document. Once an Item has had its status set to canceled, it has reached a final state.

Figure 1. State Transition Diagram
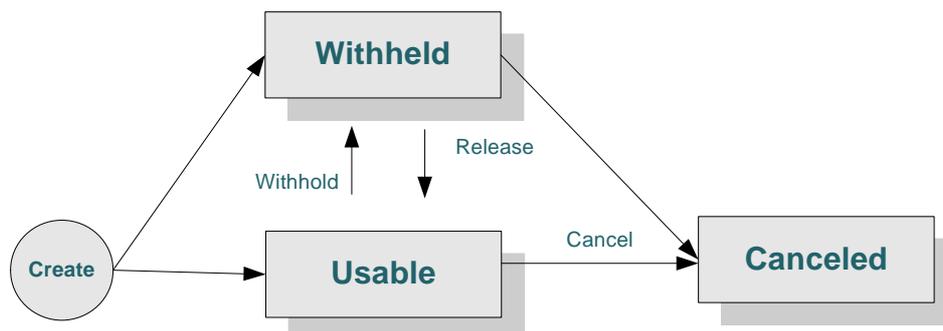
2.6.2.2 Use Cases Associated with a Status of Withheld

Use Case 1: A provider distributes a story as a newsItem (version 1) with the status usable. At a later stage he learns that there may be a problem with the information included in the Item. He sends a new version of the newsItem (version 2) with a status set to withheld. All recipients systems must display a warning on this newsItem, and recipient publishers must postpone the publication of the information contained in the newsItem until further notice. The news provider has confirmation that the information is false and decides to set the status to canceled (version 3).

Use Case 2: An eCommerce system proposes a large collection of illustrated articles managed as news items. The publisher managing the system sees that the information included in a newsItem (version 1) is not up to date anymore, and decides to hide this Item from its customers until it is properly revised. He set then its status to withheld (version 2), edits the newsItem and set its status back to usable (version 3).

2.6.2.3 Processing Model on the Recipient Side

Here is the processing model on the recipient side and relies on the **pubStatus** (page 134) and embargoed properties:

```
Test pubStatus = canceled:
      The Item must not be used, ever. Any usage of the Item must be prohib-
      ited, if needed by the way of alerts.
      Else: next
Test pubStatus = withheld:
      The Item must not be used until further notice. Any usage of the Item
      must be prohibited, if needed by the way of alerts.
      Else: next
Test pubStatus = usable:
```

Test embargoed as described in **Table 2**.

Table 2. Test pubStatus = Usable

<embargoed>	<pubStatus>	How to Process
Element is absent.	Usable	Item is usable and not embargoed.
Element exists, provides a Date/Time value.	Usable	The embargo on the item ends at the given date and time.
Element exists, but is empty. Corresponding edNote exists.	Usable	The item is embargoed as long as a condition applies which is described in an editorial note. The edNote should be formulated like this: <edNote @role="noteRole:embargo">Until end of speech</edNote>
Element exists, but is empty. No corresponding edNote exists.	Usable	The item is embargoed indefinitely. This may be overridden by a contractual agreement between the provider and the client.

2.6.3 Processing of versionCreated

If the value provided by any date/time field does not conform to the appropriate syntax (e.g. format "YYYY-MM-DDTHH:MM:SS[+-]HH:MM:SS") it MUST be considered as being not existent.

In the case of the mandatory **versionCreated** (page 70) property the full Item MUST be considered as being void.

2.7 Item Links

A powerful feature of NewsML-G2 is the capability to associate Items via links. It is therefore possible to create a network of news resources, for management and navigation purposes.

The **link** (page 111) element offers a generic mechanism for linking Items within the NAR framework as well as creating links from Items to other Web resources.

The semantic of the link MAY be refined via a relationship attribute (*rel*). In the absence of such indicator, the implied meaning of the link is "see also" (i.e. a navigation link).

The IPTC provides a recommended scheme of link relationships identified by the URI http://cv.iptc.org/newscodes/itemrelation/.

To identify the target resource either the *residref* attribute or the href attribute MUST be set, optionally both MAY be used in parallel. The *residref* attribute identifies the target resource by its globally unique identifier (if the resource has such an identifier), while the *href* attribute identifies the location of the target resource in e.g. a (remote) file system. If the target resource is an Item and the *residref* attribute is used, a version attribute MAY indicate the target Item version; in the absence of version information, the target resource is the latest version available.

The content type, a.k.a. IANA MIME type of the target resource MAY be indicated by the contenttype attribute. It MAY be complemented by a format attribute to refine the MIME type information.

In order to ease the processing of a linked resource, the size in bytes of the target resource MAY be indicated. This feature is useful if the target on the link is a Web resource. If the target resource is an Item, the size which is given here MUST be the size of the XML representation of the Item.

A **title** (page 106) child element describing the link MAY be added for display to the users.

2.7.1 Processing Links

Link processing rules:

Link.1: Processor on the consumer side: If a *guid* and a *version* are provided, check whether the specific version of the Item is accessible using this information.

Processor on the provider side: If a *guid* and a *version* are provided deliver only the item version with the requested version number.

Link.2: Processor on the consumer side: If only a *guid* is available and no *version*, check whether an item is delivered by the provider. Consider a delivered version of the item as being the latest one.

Processor on the provider side: if only a *guid* is requested and not *version*, check if any version of the item exists, and if yes provide the one with the highest version number.

Link.3: Check whether the value of the *href* attribute allows some direct retrieval of the target resource via the Web (e.g. if the scheme is http: or ftp:), or an implicit resolution mechanism (e.g. DOI).

Link.4: Signal an error or ignore the link.

2.8 News Content Metadata

News Content Metadata is directly associated with the news information conveyed by the Item, independently of the processing of the Item in a professional workflow. Such information is wrapped in the contentMeta wrapper element and split between administrative and descriptive metadata.

2.8.1 Administrative Metadata

This is a set of properties associated with the administrative facet of content, i.e. data that cannot be inferred from "consuming" (reading, listening to, watching) the content.

All properties are optional. The order of the properties in this set is flexible: the non-repeatable properties MUST come first and then the repeatable properties may be inserted in any order.

Table 3. Administrative Metadata Group Elements

Element Title	Element Name	Card	Described on Page
Urgency	**urgency**	(0..1)	152
Date Content Created	**contentCreated**	(0..1)	66
Date Content Modified	**contentModified**	(0..1)	67
Located	**located**	(0..unbounded)	114
Information Source	**infoSource**	(0..unbounded)	101
Creator	**creator**	(0..unbounded)	64
Contributor	**contributor**	(0..unbounded)	59
Audience	**audience**	(0..unbounded)	40

2.8.1.1 Dates Processing Model

Two optional dates are associated with the content of an Item.

contentCreated (page 66) and **contentModified** (page 67) processing rules:

DatesGeneral.1: If the value provided by any date/time field does not conform to the appropriate syntax (e.g. format "YYYY-MM-DDTHH:MM:SS[+-]HH:MM:SS") it MUST be considered as being not existent.

DateValues.1: If contentCreated is present it MUST NOT be later than **versionCreated** (page 70).

Error handling if it is later: at the creator's site an error alert should be issued, on the receiver's site it should be set to versionCreated.

DateValues.2: If contentModified is present contentCreated SHOULD be present as well.

In this case contentModified MUST NOT be earlier than contentCreated.

Error handling if it is earlier: at the creator's site an error alert should be issued, on the receiver's site it should be set to contentCreated

DateValues.3: If contentModified is present it MUST NOT be later than versionCreated.

Error handling if it is later: at the creator's site an error alert should be issued, on the receiver's site it should be set to versionCreated.

DateProcessing.1: The recipient processor MUST first check if a contentModified element is present.

DateProcessing.2: If not it MUST check if a contentCreated element is present.

DateProcessing.3: If not it SHOULD assume that the content was created at the time indicated by versionCreated element in itemMeta.

2.8.1.2 Audience Processing Model

Audience processing may be used to form ad hoc groups of recipients for which the Item is particularly significant or to filter out some users from the list of intended recipients of an Item.

The audience is expressed as a set of "positive" values (**audience** (page 40)) and a set of "negative" values. The logic is to make the content easy to find to the audience identified by the positive values, but keep this content away from the audience identified by the negative values. An attribute of each property may indicate the expected significance of the content for this specific audience, and acts as a threshold for recipient filters.

The model for the audience processing is only a part of the overall filter that is used to determine whether a particular recipient is entitled to have access to the Item. It could be combined with the processing of other properties to further narrow the number of Items that match the recipient profile.

The processing rule has to be considered as a function which returns TRUE to indicate the recipient is entitled to receive the content, FALSE in case he is not entitled and NULL if the item does not contain any audience statements that apply to the Recipient.

Audience processing rules:

Audience.1: If any of the exclAudience properties applies to the recipient: return FALSE

Audience.2: If any of the audience properties applies to the recipient: return TRUE.

Audience.3: Return NULL.

2.8.2 Descriptive Metadata

This is a set of properties associated with the descriptive facet of news content, i.e. data that can be inferred from "consuming" (reading, listening to, watching) the news.

All properties are optional, repeatable and may be inserted in any order.

Table 4. Descriptive Metadata Group Elements

Element Title	Element Name	Card	Described on Page
Language	**language**	(0..unbounded)	109
Genre	**genre**	(0..unbounded)	88
Keyword	**keyword**	(0..unbounded)	107
Subject	**subject**	(0..unbounded)	148
Slugline	**slugline**	(0..unbounded)	147
Headline	**headline**	(0..unbounded)	94
Dateline	**dateline**	(0..unbounded)	76
By	**by**	(0..unbounded)	42
CreditLine	**creditline**	(0..unbounded)	65
Description	**description**	(0..unbounded)	78

2.8.3 Other Content Metadata

Each provider may add a set of metadata properties which have to be defined in a non-IPTC-G2 namespace. See also **XML Namespaces** (page 33) and **Extension Points in XML** (page 34).

2.9 newsItem Content

Content may be included by value or by reference, and useful characteristics are represented along with such content, in order to facilitate its processing.

Alternative renditions of the news content, i.e. different technical representation of the same logical content, are wrapped by a **contentSet** (page 58) wrapper element. Their order of appearance in contentSet is of no relevance. Their presence is optional: this allows for a lightweight and extensible representation of information.

Each rendition SHOULD by defined by a *rendition* attribute.

All alternative renditions SHOULD be derived from an original rendition by a software processor. For example: images in different resolutions, vector graphics and alternative bitmap images, text in different formats (e.g. NITF and PDF). The rendition from which all other renditions originate is indicated by the *original* attribute of contentSet; this attribute takes as a value the local identifier (id) of the original content component included in the contentSet.

They are three kinds of content components, inline XML, inline data and remote content:

- The **inlineXML** (page 98) wrapper element holds XML content which is directly embedded in the element. The root element of this structure must be the root element of the language. Content may belong to any XML language capable of expressing generic or specialized news information, e.g. NITF, XHTML, SportsML or XBRL. The XML vocabulary is identified by a content type attribute (*contenttype*).

- The **inlineData** (page 96) wrapper element holds plain-text or base64 encoded content. Plain text or CDATA content MUST be identified by the "text/plain" content type. Binary content, like images, audio clips or even PDF or Word documents may be exchanged after proper encoding, but it is strongly recommended to use this structure for small assets only. The encoding algorithm MAY be indicated using the *encoding* attribute. In the absence of this attribute, the content must be plain text, and the content type must be set accordingly. Encoding is constrained to base64 at this level of conformance.

- The **remoteContent** (page 139) wrapper element may be used for representing any kind of media and data format. The data is stored independently of the newsItem and is referenced via a hyperlink (href). The size in bytes of the remote content MAY be indicated. The same rendition of content MAY be present at different remote locations. In such a case the same value of the *rendition* attribute MAY be given to several remoteContent elements.

  The description of the content in each content component MAY be complemented by a content type (contenttype), a format acting as an optional refinement of the content type plus additional news content characteristics.

2.10 News Content Characteristics

newsContentCharacteristics (page 182) are these physical properties of media content like the height and width of a picture, the word count of a news story or the duration of an audio clip, that help making selections among alternate renditions of news content.

The characteristics defined by the IPTC are a small and typical set of properties. Individual providers may add more characteristics they consider reasonable, i.e. audio data for professional broadcasting may require a different set from audio content for a podcast.

3 Representing Concept Information - concept Component

3.1 Concept Component

Concepts fall in two broad categories: named entities and generic (or abstract) concepts. Generic concepts range from themes (e.g. soccer) to emotions (e.g. smiling, love); they have no specific property defined, beyond generic properties. Named entities are people, organisations, geopolitical areas, points of interest and objects for which a specific set of properties is defined for the purpose of a refined definition and improved search and processing capabilities.

The **concept** (page 46) element provides a set of properties shared by all concepts.

A concept can be identified in different schemes by different controlled values, this is why a concept identifier must be unambiguous, but cannot be unique: for example, a company is commonly identified by different ticker symbols. In the case of abstract topics, the strict sameness of two concepts may be subject to discussion, and therefore a notion of equivalence of concepts is preferred.

A concept MUST have a concept identifier, expressed as a **conceptId** (page 48) child element.

The conceptId element MUST have a *qcode* attribute. It MAY have a *created* attribute and a *retired* attribute which limit the usage of the concept identifier in time.

A concept MAY have a **type** (page 151) child element. The type of a concept reflects its nature, e.g. generic, person, organisation, geopolitical area, point of interest etc…

A concept MUST have a **name** (page 133) and MAY be further defined by **remoteInfo** (page 141) and in natural-language by a **definition** (page 47) or **note** (page 121). These labels are repeatable and MAY be specified in multiple languages.

More detailed facets of a concept (e.g. that the concept "is" an artist, listed company, city, restaurant) MAY be expressed by a specific **facet** (page 85) property. The facet property MAY have a *rel* attribute which specifies the exact facet which is described.

The remoteInfo element MAY be used to express any external information about the concept as such. Be aware that the link element in the itemMeta wrapper should only be used for linking a Concept Item as a whole to another resource, e.g. a previous version, or another ConceptItem from which this one was derived and not to resources relevant to describing the Concept.

A concept MAY have a set of alternative identifiers, expressed as **sameAs** (page 144) child elements.

The sameAs element MUST have either a qcode or a literal attribute which identifies a concept. It MAY additionally have a type attribute which reflects the nature of the associated concept, and MAY have one or more names (see **Flexible Property Type** (page 167).

3.2 Relationships Between Concepts

A concept MAY be associated with other concepts in the form of a taxonomy (i.e. a hierarchy of concepts) or thesaurus (i.e. a set of concepts associated via standard relationships). A concept MAY have an indication of most standard relationships as **broader** (page 41), **narrower** (page 118) and **related** (page 137) child elements.

The broader, narrower and related properties MUST have either a qcode or a literal attribute which identifies a concept. They MAY additionally have a type attribute which reflects the nature of the associated concept, and MAY have one or more names (see **Flexible Property Type** (page 167).

The *broader*, *narrower* and *related* properties MAY also have *validfrom* and *validto* attributes which limit the relationship in time, a *rel* attribute which details the name given to the relationship and a *rank* attribute which specifies the rank of the current concept among concepts having a relationship to the target concept. They also have a *facet* child property for expressing an intrinsic property of the related concept.

3.3 Details on Specific Entities

Details associated with specific entities MAY additionally be defined. All have been chosen for their potential usefulness in the news industry.

personDetails (page 127) include a date of birth (born) and date of death (died) a repeatable indication of affiliation with an organisation and contact information (contactInfo).

organisationDetails (page 125) include a date of foundation (founded) and date of dissolution (dissolved), a repeatable location and contact information (contactInfo).

The registered address of an organisation is indicated as part of its contact information; in such a case this address may not be used for making direct contact with this company.

geoAreaDetails (page 90) include the geographic coordinates (position) of the place.

The position MUST have *latitude* and *longitude* attributes. It MAY have an indication of the altitude above the zero elevation reference level.

It MAY have an indication of coordinate reference system (*gpsdatum* attribute) expressed as a string. In the absence of this attribute, the WGS84 system is assumed.

POIDetails (page 129) include the geographic coordinates (position) of the place, plus practical information like opening hours (openHours), capacity, access information, details on the location (e.g. room number, stair number etc.), and contact information (contactInfo).

objectDetails (page 122) include a date of creation, a creator of the object and a copyright notice.

3.3.1 Contact Information

contactInfo (page 52) is repeatable in the definition of a person, an organisation and a Point of Interest, and each set of properties supports a *role* attribute which makes possible to group together all information belonging of the same nature.

Contact information include email addresses, instant messaging addresses (im), international phone numbers, international fax numbers, web addresses, postal addresses and notes.

E-mail and instant messaging addresses, phone and fax number are all electronic addresses. These are qualified by a *role* attribute which specifies the nature of the address, e.g. home or work.

3.3.2 Postal Address

The definition of a Postal Address (**address** (page 130)) includes free-text lines (in the format expected by a recipient postal service), the indication of a locality (i.e. city, town, village etc…), a subdivision of a country (area), a country and a postal code (postalCode).

A postal address is structured as a set of properties likely edited and displayed as a form. The relative order of its properties is not universal, and if used for traditional postal mail, presentation algorithms are to be developed which depend on the source and recipient countries.

The city, country area and country may be indicated as a name or as a controlled value. The use of an ISO compliant country code is particularly recommended.

4 Managing Individual Concepts - conceptItem

An XML Schema file corresponding to the specifications for this item is available (see **The Full Set of Specification Documents** on page 3).

4.1 Description

A **conceptItem** (page 49) aims to convey knowledge about a unique concept (a named entity such as an organisation or an abstract notion such as a news subject). Typically a conceptItem itself holds only rather short and structured information about the concept and about its relationships with other concepts.

Typical characteristics of a conceptItem are:

♦ It focuses on a single concept or entity.

♦ It will usually be updated infrequently but over a long period of time, when the information about the concept evolves.

♦ Its content is of long term interest.

♦ It may be referenced by other items.

Different conceptItems, managed by different providers, may contain structured information about the same concept.

4.2 Structure of a conceptItem

The model of a conceptItem is very similar to the model of a newsItem. Both share the same indicators of compliance with a standard and conformance level, Identification and versioning, Signature, Rights Information, Item Metadata, Item links. Please review the corresponding specification of a newsItem for more information.

Note that the globally unique guid of a conceptItem, which is used for management purposes, must not be confused with the unambiguous concept identifier (**conceptId** (page 48)) defined by an authority and conveyed as part of the content of the Item.

4.3 Item Metadata

The IPTC provides a mandatory standardised scheme applicable to the **itemClass** (page 102) property, identified by the URI: http://cv.iptc.org/newscodes/cinature/.

4.4 Concept related Metadata

The set of administrative metadata is common to all classes of Items. Please review **Representing News - newsItem** (page 12) for more information.

A conceptItem does not support descriptive metadata.

4.5 conceptItem Content

The content of a conceptItem is a concept component (see **Concept Component** on page 20).

5 Managing Sets of Concepts - knowledgeItem

An XML Schema file corresponding to the specifications for this item is available (see **The Full Set of Specification Documents** on page 3).

5.1 Description

A **knowledgeItem** (page 108) bundles a set of concept components which are managed and exchanged as a whole. A knowledgeItem is used best where a provider wants to circulate a snapshot of a set of entries from one or more controlled vocabularies.

The concepts represented in a knowledgeItem can be of different types, and their identifiers may come from different schemes. A "scheme definition" is therefore a particular case of structure, where all concepts support a concept identifier from a same specific scheme.

Examples of knowledgeItems are the taxonomy of IPTC Subject NewsCodes or an authority list of people's descriptions maintained by a given provider. Typical characteristics of a knowledgeItem are:

♦ It contains a meaningful set of concepts components.
♦ It will usually be updated infrequently but over a long period of time, for example when a controlled vocabulary evolves.
♦ Its content is of long term interest.

5.2 Structure of a knowledgeItem

The model of a knowledgeItem is very similar to the model of a newsItem. Both share the same indicators of compliance with a standard and conformance level, Identification and Versioning, Signature, Rights Information, Item Metadata, Item links. Please review **Representing News - newsItem** (page 12) for more information.

5.3 Item Metadata

The IPTC provides a mandatory standardised scheme applicable to the **itemClass** (page 102) property, identified by the URI http://cv.iptc.org/newscodes/cinature/.

5.4 Knowledge Related Metadata

The set of administrative metadata is common to all classes of Items. Please review the corresponding specification of a newsItem for more information.

The set of descriptive metadata is listed below. All properties are optional, repeatable and may be inserted in any order.

Table 5. Knowledge Descriptive Metadata Group Elements

Element Title	Element Name	Card	Described on Page
Language	**language**	(0..unbounded)	109
Keyword	**keyword**	(0..unbounded)	107
Subject	**subject**	(0..unbounded)	148
Description	**description**	(0..unbounded)	78

Each provider may add a set of metadata properties which have to be defined in a non-IPTC-G2 namespace. See also **XML Namespaces** (page 33) and **Extension Points in XML** (page 34).

5.5 knowledgeItem Content

A **conceptSet** (page 51) wrapper element contains a set of concept components (see **Concept Component** on page 20). Their order of appearance in conceptSet is not relevant.

Note: All concept definitions share the same catalog of schemes, declared at the top of the knowledgeItem.

6 Packaging Items - packageItem

An XML Schema file corresponding to the specifications for this item is available (see **The Full Set of Specification Documents** on page 3).

A **packageItem** (page 126) facilitates the packaging of all kinds of Items, from really simple constructs to the highly hierarchical structures created by some news providers.

Examples of packageItems are a collection of pictures, a "top ten" list of newsItems, an unordered set of newsItems relative to the same event, the representation of a newspaper section or page.

Typical characteristics of a Package Item are:

♦ It provides some structure to news related information, and is expressed via a hierarchy of items.

♦ The Items found in a packageItem stay independent from the package: they can be managed individually, and the package keeps only references to them.

♦ Its content is of medium term interest.

6.1 Structure of a packageItem

The model of a packageItem is very similar to the model of a **newsItem** (page 119). Both share the same idicators of compliance with a standard and conformance level, Identification and versioning, signature, rights information, Item metadata, Item links. Please review the corresponding specification of a newsItem for more information.

6.2 Item Metadata

The IPTC provides mandatory standardised schemes applicable to the itemClass property of a packageItem, identified by the URI http://cv.iptc.org/newscodes/ninature/ and http://cv.iptc.org/newscodes/cinature/.

6.3 Package Related Metadata

The set of administrative and descriptive metadata is common between packageItems and newsItems. Please review **Representing News - newsItem** (page 12) for more information.

6.4 packageItem Content

A **groupSet** (page 93) represents a tree of Items. All Items of a package are included by reference, as physical inclusion would break the capability to manage inner Items independently of the outer Package Item.

The groupSet is optional. This allows for a lightweight and progressive representation of information.

There MUST be at least one **group** (page 91) element in the groupSet. If there is more than one group in the groupSet element, a specific group acts as the root of the tree. In this case the value of *root* attribute of the groupSet element MUST be the local reference to the group acting as a root.

A group component contains references to other group components (**groupRef** (page 92) with its *idref* attribute) of the same package item and references to Items or Web resource (**itemRef** (page 104) with its *guidref* and *href* attributes), in any order.

Each group MUST have an *id* attribute which identifies this group, and each group MUST have a *role* attribute which indicates the part this group plays within its container.

The order of the sub-groups and references to Items MAY be significant; a *mode* attribute indicates whether the elements in the group are complementary and unordered, complementary and ordered or a set of alternative elements. In the absence of a *mode* attribute the group is treated as complementary and unordered.

The itemRef element indicates the relationship between the group and the target resource, plus a title for this resource.

Sample:

```
<groupSet root="g1">
<group id="g1" mode="mode:seq" role="group:main">
<groupRef idref="g2"/>
<itemRef guidref="urn:newsml:iptc.org:20070530:tutorial-text-xhtml"/>
</group>
<group id="g2" role="group:gallery">
<itemRef guidref="urn:newsml:iptc.org:20070530:tutorial-iptc-logo"/>
<itemRef guidref="urn:newsml:iptc.org:20070530:tutorial-video"/>
</group>
</groupSet>
```

7 Dealing with Controlled Values

7.1 {scheme, code} Pair, Scheme URI and Concept URI

Many properties usually have their value taken from a well defined scheme, i.e. a controlled vocabulary (i.e. a classification system, authority list, taxonomy, thesaurus etc ...).

These values are represented by a formal combination - a {scheme, code} pair - primarily intended to be consumed by processing software. A scheme is logically a closed set of related concepts, and a {scheme, code} pair unambiguously identifies a single concept.

A scheme is in practice a list of codes managed by a specific authority (which we shall refer to as the Scheme Authority), which may be the IPTC or any other well known standardisation body, or may be an individual news provider. A {scheme, code} pair therefore fully identifies a term from a controlled vocabulary (i.e. a scheme). A code MUST be persistent over time in order to avoid ambiguities when processing archives documents.

A scheme is fully and unambiguously identified by a scheme URI. The concept represented by a code is fully and unambiguously identified by a concept URI. The concept URI is obtained by appending the code to the scheme URI. **Qualified Code (QCode)** (page 27) shows how a more compact form of a concept identifier is used in the news workflow.

As an example, an IPTC scheme for news categories might be identified by the URI "http://cv.iptc.org/newscodes/theme/". If the code "15000000" represents the concept of "Sport", then the concept URI for "Sport" would be "http://cv.iptc.org/newscodes/theme/15000000".

It is not mandatory that the Scheme Authority maintains the complete list of codes making up a given scheme in any particular form, e.g. as an XML file. It is sufficient that an unambiguous identifier is defined for each scheme a provider uses, and that this identifier is known by a Catalog (see **Catalog of Controlled Vocabularies** on page 13) to the customers of the news feed this provider offers.

Common needs are:

♦ To access human readable information about a scheme.

♦ To retrieve all terms of a scheme (e.g. to display a list of choice).

♦ To access human readable information about a qualified code.

♦ To check that a qualified code belongs to a scheme.

♦ To retrieve the definition of the concept identified by a qualified code in a given scheme.

Therefore the scheme URI SHOULD resolve to a resource (or resources) containing information about the scheme in both human-readable and machine-readable forms. Meeting this requirement is mandatory for schemes which are to be compliant with the Semantic Web.

The concept URI SHOULD also resolve to a resource (or resources) containing information about the concept in both human-readable and machine-readable forms. Meeting this requirement is mandatory for concept URIs which are to be compliant with the Semantic Web.

If content negotiation is implemented using HTTP, then the HTTP Accept header should be used to request information in the required format and the HTTP Accept-Language header should be used to request information in the required human language.

When designing a scheme URI, the following points should be taken into consideration:

♦ Each scheme URI must end with a suitable terminating character, e.g. "/" or "#". Each of these has various advantages and disadvantages, which are discussed extensively in documents available on the Web.

♦ One point worth mentioning here is that not all strings which can be used to construct a legal URI are automatically legal in the context of HTML. For example, "http://cv.iptc.org/newscodes/theme.html#15000000" is not a legal HTML URI, as an HTML fragment name cannot start with a digit.

7.2 Qualified Code (QCode)

In order to manipulate controlled values in an efficient manner, a compact representation of a concept identifier is needed, a syntax which allows the use of a {scheme, code} pair as the value of an XML attribute.

For this purpose a short string called scheme alias (aka prefix) is defined by a provider as a substitute for a scheme URI in the scope of a single Item, and a compact notation of a scheme-code pair is defined, called qualified code or QCode.

The datatype for a compact notation of a scheme-code pair is called qualified code or more simply QCode. QCodes are the mandatory way to express controlled values in properties like **itemClass** (page 102) or **pubStatus** (page 134).

QCodes are notated by the following syntax: a scheme alias acting as a first part, followed by a colon (:) character, followed by a code from the scheme. They are case sensitive.

The value space of the **QCodeType** (page 175) datatype is a set of {scheme, code} pairs which identify concepts.

Note that:

♦ This is similar to the value space of the QName datatype, i.e. a set of {namespace, local part} pairs which identify element or attribute names.

Note: QNames cannot be used for this purpose, because the local part of QNames cannot be a numeric, but the News industry and the Financial industry are full of taxonomies making use of numeric codes. They aren't alone in this aspect (consider ISBN and ISSN).

♦ QCodes allow any sequence of legal URI characters in the code part, including, for example, digits only, dashes, slashes, etc.

♦ QCodes MUST have a non-empty scheme alias.

QCodes can be viewed to a certain extent as short, lexical representations of URIs. Be careful: the mapping from a qualified code to a URI is not bijective: a URI cannot be mapped back to a qualified code, because the separator of the tuple is not explicitly defined in the URI.

In order to resolve a qualified code, a processor MUST loop through the scheme elements defined in the scope of the Item. If the QCode scheme alias is found as value of the *alias* attribute of a scheme element, the scheme URI is the associated *uri* attribute and the controlled value is the resulting {scheme URI, code} pair. If no corresponding scheme alias is found, the processor SHOULD raise an error and consider that the property has no value.

7.2.1 Lexical Space Specification and Processing Model for Scheme URIs, Scheme Aliases, Codes, and QCodes

7.2.1.1 Lexical Space

♦ Lexical space for Scheme URIs: conforms with the Unreserved Characters of RFC 3986, section 2.3. Reserved Characters as per RFC 3986, section 2.2 must be considered depending on the selected URI scheme.

♦ Lexical space for Aliases: all characters except colon (#x3A) and white space (#x20 | #x9 | #xD | #xA).

♦ Lexical space for Codes:

● All Unreserved Characters of RFC 3986, section 2.3., except white space (#x20 | #x9 | #xD | #xA). Reserved Characters as per RFC 3986, section 2.2 must be considered depending on the selected URI scheme.

● Whitespace characters must be replaced by a sequence of one or more unreserved characters that is reused for this purpose according to the practices of the provider; it is recommended that such a sequence is not part of the any of the codes used by the provider

7.2.1.2 Processing Model

Given are:

- ♦ a Scheme URI
- ♦ a corresponding Scheme Alias
- ♦ a Code

7.2.1.2.1 QCodes

7.2.1.2.1.1 Creating QCodes (any G2 Item)

1. Concatenate the Scheme Alias, a colon and the Code to a string.
2. Apply any required XML encoding to this string (Note: this is typically done by the XML processor software).
3. The resulting string is applied as a QCode value.

7.2.1.2.1.2 Receiving/Parsing QCodes from an XML Document (any G2 Item)

1. Retrieve the QCode value from the XML document
2. Apply any required XML decoding (Note: this is typically done by the XML processor software) .
3. To split a QCode term into the alias and the code part, identify the first colon searching from left to right. The string to the left of the colon is the alias; the string to the right is the code. If it encounters none the QCode is invalid.
4. Check whether the alias is defined in the catalog. If it is not, the QCode is invalid

7.2.1.2.2 Concept URIs

G2 processors should be able to process Internationalized Resource Identifiers (IRIs) as per RFC 3987.

7.2.1.2.2.1 Creating a Concept URI/IRI:

1. Concatenate the Scheme URI and the Code resulting in the Concept URI.
2. Check if any Reserved Characters (see RFC 3986 section 2.2) are included based on the used URI scheme. In particular check for the reserved characters of the http scheme. If such characters are used apply percent-encoding as per RFC 3986.

Note: This check and any corresponding changes should be done by software at the application level because only at this level is it known if e.g. a & character is an http URL delimiter or a character in one of the parts of the URI.

3. With this (potentially encoded) string:

First, consider it from the IRI RFC 3987, section 3.1 perspective:

When the IRI is used solely for identification purposes, it is not necessary to map the IRI to a URI (see section 5). However, when an IRI is used for resource retrieval, the resource that the IRI locates is the same as the one located by the URI obtained after converting the IRI according to the procedure defined here.

Second, if the IRI is an IRI as per RFC 3986 and if it should be used for retrieval, apply any required per-cent-encoding as defined by RFC 3987 and RFC 3986. This encoding could be done by standard software (component).

7.2.1.2.2.2 Comparing Concept URIs/IRIs:

If provided Concept URIs are IRIs per RFC 3987 then they must be compared for equivalence as defined per RFC 3987, section 5.

If provided Concept URIs are URIs per RFC 3986 then they must be compared for equivalence as defined per RFC 3986, section 6.

7.3 Processing Catalogs

7.3.1 Structure of a Catalog

A **Catalog** (page 44) MUST have one or more scheme elements. A catalog MAY have one or more titles in different languages. It MAY also have a pointer to some additional information available on the Web, and especially its evolution and latest version. Such information will help people follow the evolution of a shared catalog like the IPTC G2 catalog, and include in their Items a reference to the latest version if they wish.

It MUST have one or more scheme elements. A scheme element MUST have a scheme *alias* attribute and a corresponding scheme *uri* attribute.

Each Item defines its own set of scheme definitions, and there is no interaction between scheme definitions in different Items. Scheme alias declarations are local to the Item in which they appear and cannot be overridden in a given Item.

7.3.2 Processing Remote Catalogs

By activating the hyperlink of a remoteCatalog (see **catalogRef** on page 138), a plain catalog structure is returned, and MUST be processed as if were locally defined.

7.3.3 Caching a Catalog

It is recommended for a processor to cache a remote catalog indefinitely, so that provider's servers are not overcharged with file requests.

When a processor opens an Item, it MUST check the URL(s) of the catalog(s) found in its header. If a catalog has not been previously cached, the processor MUST fetch it, check it, and SHOULD store its content in a cache.

Different remote catalogs MAY define different mappings for a given scheme alias. An entry in a remote catalog cache is therefore a triple {remote catalog URL, scheme alias, scheme URI}.

7.3.4 Checking a Catalog

It is OK for one scheme URI to have two aliases. It is an error if one alias is mapped to two different URIs in the scope of a single Item (an issue called alias collision). Note that this error may arise within a catalog, as well as across a set of catalogs (local or remote) declared in a given Item.

Before processing an Item, a processor MUST check its catalogs. If an alias collision is found, the processor MUST reject the Item as it can lead to misinterpretation of the information.

Note: If an aggregator finds an alias collision (i.e. the same alias associated with two URIs) while creating a packageItem which aggregates content from various providers, the aggregator MUST change one or both of the aliases before publishing the packageItem. This can be done by creating and publishing one or more non-clashing external catalogs (which replace the original external catalogs) and/or by replacing one or more external catalogs with non-clashing in-line scheme declarations.

7.4 Processing Schemes

7.4.1 Evolution of Scheme URIs

Schemes evolve: terms are added, names are changed, terms are retired. An authority will release a new version after each update. A provider may not want to adopt the latest version of a scheme. The scheme URI MUST be stable as long as the evolution does not break backward compatibility rules.

7.4.2 Retrieving All Terms of a Scheme

Here we are interested in schemes defined as an explicit list of terms. Schemes defined via an algorithm are out of scope of this section. A scheme definition is defined as the finite set of terms composing a scheme. A scheme definition MAY be a subset of an original scheme, e.g. maintained by an external authority.

Note: An authority is not necessarily able to make scheme definitions available for operational use, and a provider may use only a subset of the scheme defined by an authority.

A provider SHOULD make a scheme definition available for its users for operational use as the content of a knowledgeItem, where each term is represented as a concept component, i.e. a concept identifier, a list of names in one or more languages, plus additional properties of the concept (all but the identifier being optional).

An authority MAY provide different variants of a scheme definition, e.g. a list of codes, a list of codes plus a name in a specific language, a list of codes plus names in all available languages.

For each variant of a scheme definition, the URL of the corresponding knowledgeItem SHOULD be available using e.g. content negotiation.

Selection from among the renditions MAY be performed automatically (if the processor is capable of doing so) or manually by the user selecting from a hypertext menu.

7.5 Qualified and Typed Properties

Qualified properties – of datatype **QualPropType** (page 176) – only support controlled values in the format of QCodes.

A large subset of these properties supports concepts of different types as a value. Therefore typed qualified properties – of datatype **TypedQualPropType** (page 180) – additionally provide a concept type relative to the value of the property.

For example, the type of the concept assigned as 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 concept type of a **creator** (page 64), **contributor** (page 59) and **infoSource** (page 101) of an Item may be a person or an organisation

Qualified properties MAY be complemented by one or more names associated with the underlying concept. Names can be expressed in different languages or variants.

7.6 Flexible Properties

It is not always possible or sensible to use a QCode as metadata value. As an example, few news organisations maintain a formal listing of their editors, and therefore using a controlled value for the creator property is not always possible.

In order to fulfil this need, a large number of properties allow for literal values – i.e. uncontrolled free-text values – to be applied instead of controlled values. But also free-text literal values are identifiers of a concept and not a human readable description.

Therefore flexible properties – of datatype Flexible Property Type – support both controlled (qcode) and uncontrolled (literal) values.

QCodes and literals are mutually exclusive for one property, but either one or the other MUST be indicated.

The value of a flexible property identifies a given concept with a specific type. It is useful to express e.g. that the provider of a news item is a person or an organisation. The *type* of the concept MAY be indicated as an attribute of the flexible property.

One or more additional name properties MAY be provided in different languages and variants for display. If the value of the property is a literal and no additional name is given, the recipient MAY use the literal value for direct display. But as the primary use of a literal is being an identifier it may not tell much about the meaning of the metadata.

8 Dealing with Labels and Blocks

8.1 Introduction

Labels expose aspects of news as natural language strings. They are assertions expressed as natural language strings intended to be consumed by human beings. They are typically displayed alongside the content of an Item or in place of Items in a list, providing a means of selection among them.

Blocks are simply labels with an additional line break. They are primarily used for notes, comments or instructions created by a news provider for use by recipient editorial teams.

8.2 Internationalization Attributes

In an international news workflow, fine grained control of language information in the hierarchy of nodes constituting an Item is needed.

For this purpose, all labels share an International Attributes Group (see **Table 156** on page 181) , i.e. an optional language tag (xml:lang) and indication of the directionality of textual content (dir).

9 Exchanging Items - newsMessage

A **newsMessage** (page 120) facilitates the exchange of all kinds of items by any kind of digital transmission, especially in a broadcast or multicast network.

The content of a newsMessage is an **itemSet** (page 105) component.

An itemSet contains a set of newsItems, packageItems, conceptItems and knowledgeItems. The model assigns no significance to the order of Items within the News Message.

The use of a News Message is totally optional in a news workflow. Alternatively, Items may be exchanged using SOAP, WebDAV, ICE, the Atom Publication Protocol (using Atom feeds, and items as payload of an Atom entry) or any other possible syndication protocol.

It may be useful for a recipient to store the information conveyed by a message, but this is not mandatory. Usually the messaging information will be maintained separately from the information relative to the contained items.

9.1 Message Information

A newsMessage MUST have a date of transmission – **sent** (page 75). The date of transmission MAY not be updated in case of retransmission of the message.

A newsMessage MAY have a **sender** (page 146) child element, which may be an organisation or a person. The structure of this string is not specified by the IPTC. Best practice is to identify a sender by its domain name

It MAY have a transmission identifier –**transmitId** (page 150) – and a priority of transmission. No two newsMessages sent by the same sender on the same date can have the same identifier. In case of retransmission it is not required to update this identifier. The structure of this string is not specified by the IPTC.

It MAY indicate the point of **origin** (page 124) of the message, using a provider defined syntax.

It MAY have one or more **timestamp** (page 149)(s) associated with the message. The exact meaning of this timestamp may be refined by a *role* attribute.

It MAY have one or more **destination** (page 79) properties using a provider defined syntax, and the indication of one or more channels – **channel** (page 45) – of transmission.

Each particular provider is equally able to add to this set information of its own, by mutual agreement with the recipients of the Item.

9.2 About Using Schemes in a newsMessage

It is important to note that a newsMessage does not define any catalog that would be common to the Items it contains. There is no interaction between the scheme declarations present in different Items exchanged in a newsMessage.

10 Specification Reference

This section provides all specifications for this G2-Standards, the different specifications tables are cross referenced from other parts of this document.

10.1 Introduction to the Common Components

News exchange formats share many metadata properties as they are about the same data: something newsworthy to be exchanged. For that reason the family of IPTC G2-Standards share a large set of properties which are common to all family members and this common data model and set of specifications is called the IPTC News Architecture for G2-Standards (NAR).

This Specification Reference section provides a mix of specifications coming from the NAR and additionally from this G2-Standard.

The components specified in this Specification Reference can be split into these 3 groups:

1. Fine grained components, called a datatype. A datatype has no specific business meaning or semantics of its own and only takes on business meaning when used as the data type of a property. Datatypes fall in two groups:

   - Simple data types are primitive data types, as found in software languages or XML schema definitions (e.g.. integer, string). Some restriction may be imposed, such as Int100Type where an integer has been restricted to a value range of 0 to 100.

   - Complex data types are simple data types extended to add further information in order to correctly represent the value. Such ancillary information takes the form of attributes. For example a Label-Type supports mixed content and is extended with language and role attributes.

For a G2-Standard the names of datatypes end with a "Type" suffix (e.g. QCodeType).

2. Medium grained components, called basic component or property. A property represents a single piece of business information and uses an existing data type or defines it own local datatype to provide its content model. It is capable of being used independently or as part of a group. Like a complex data type, a basic component can be qualified by ancillary data if required to complete its meaning. For example, a slugline element of data type string supports an additional separator attribute.

3. Coarse grained components, called aggregate component. It is a collection of properties that together is more than the sum of its constituent parts. The properties composing the whole can be properties or aggregate components. An aggregate component may be designed so it supports an extension point where news providers can extend its usage. For example, a descriptive component is defined as a group of properties like title and subject, and a person component is defined as a group of properties like name and date of birth.

10.2 General Specifications

10.2.1 XML Namespaces

Table 6. XML Namespaces

Namespace URI	Recommended Alias	Usage Note
http://iptc.org/std/nar/2006-10-01/	nar	For all common components of the IPTC G2-Standards.

10.2.2 MIME Types

Table 7. MIME Types

Namespace URI	Usage Note
application/vnd.iptc.g2.newsitem+xml	For all kinds of G2 News Items.
application/vnd.iptc.g2.conceptitem+xml	For all kinds of G2 Concept Items.
application/vnd.iptc.g2.packageitem+xml	For all kinds of G2 Package Items.
application/vnd.iptc.g2.knowledgeitem+xml	For all kinds of G2 Knowledge Items.

10.2.3 Extension Points in XML

For attributes: each element of a G2-Standard allows to add provider specific attributes from any other XML namespace than the News Architecture for G2 namespace (see **XML Namespaces** on page 33).

For elements: Some elements which have child elements allow to add provider specific elements from any namespace other than the News Architecture for G2 namespace (see **XML Namespaces** on page 33). A few elements allow adding any element from any XML namespace - including the News Architecture for G2 namespace - but this is a special case only.

10.3 Implementation Design Rules

These design rules were applied while developing the G2-Standards. Some apply to all kinds of technical implementations, other only to one specific implementation. Further some rules are only applicable at one of the Conformance Levels CCL or PCL.

- Each element supports editing attributes (PCL).
- Each element has an extension point at the attribute level (XML implementation only).
- Each element containing an international string supports i18 attributes (CCL).
- Each ancestor of an element containing an international string supports i18 attributes (PCL).
- Children of wrapper elements: mandatory children come first, they are in a specific order, optional (and in most case multiple) elements follow, they can be inserted in an arbitrary order (XML implementation only).
- Each wrapper element has an extension point as its last child element (XML implementation only).

10.4 Processing Model Terminology

For many components of the G2-Standards this specification provides also a processing model. Find below how these processing instructions should be read.

- A Processing Model provides rules for the proper processing of metadata properties and their values. Each rule may be divided into steps.
- Each rule gets an integer number assigned, steps for this rules are indicated as decimals to this number. Example: rule 12, step 3 = 12.3
- Many rules can be considered like a function in programming, hence as a sequence of processing steps in the scope of a block. These terms will be used for defining the rules and are based on this basic layout:
  - "quit" = the processing of this function stops at this step and quits the current context to the calling context.
  - "quit and return ..." = see "quit", plus: a value of "..." is returned to the calling context.
  - "if ... :" = a condition is expressed and right to the colon the processing that results from meeting this condition.
  - If the condition is NOT met the default processing is "proceed to the next step of this processing rule". A specific processing for this case is preceded by the term "otherwise".

10.5 Component Structure Format

Table 8 describes the component (element and datatype) specifications of the G2 data model. This table is divided into two sections:

♦ The upper section contains the specification of generic properties of the component.

♦ The lower section(s) contain the specification of the component based on the W3C XML Schema 1.0 (XMLSCHEMA-1.0) specifications. This section may contain different specifications at the Core Conformance Level (CCL) and the Power Conformance Level (PCL) of the G2 data model.

Descriptions of the individual specifications can be found in **Table 8**.

Table 8. Component Structure Format

(XML) Data Model	Defines a high-level data model for this component. The value is one out of: simple datatype/complex datatype/element/attribute group.
Namespace (Prefix)	Namespace for the name of this component. Is either *nar* for the generic G2-Standards namespace or a prefix for any other namespace. Which prefix is assigned to which namespace is defined by a heading section of a G2-Standard specification document.
Name	The technical reference of the component (must align with the name in the XML Schema).
Title	The natural-language label of the component.
Definition	A concise definition of the semantics of the component.
User Note(s)	Any notes addressing the (end-)user of the component with a focus on its proper use.
Implementation Note(s)	Any notes addressing the implementer of the component into any technical system.
XML Schema Spec	At: Both CCL and PCL / CCL / PCL; indicates at which conformance levels this XML Schema specification applies.
Datatype	The XML Schema datatype or any datatype defined by a G2-Standard.
Internally Ctrl Values	A definition of one or more values if they are controlled by the XML Schema, e.g. an enumeration or regular expression.
Externally Ctrl Values	A definition of any controlled vocabulary with values to be (exclusively) used with this component.
Attribute(s)	One or more XML attributes defined for this component if it is either a complex datatype, an element, or an attribute group.
Child Element(s)	One or more child elements defined for this component if it is either a complex datatype or an element.
XML Schema Note(s)	Any notes regarding the implementation of this component into the XML Schema of this G2-Standard.
Example(s)	One or more XML snippets showing use-cases for this component.

10.6 Element Definitions

10.6.1 Access

Table 9. Access

(XML) Data Model	Element
Namespace (prefix)	nar
Name	access
Title	Access
Definition	Ways to access the place, including directions.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**BlockType** (page 159)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.2 Accountable Person

Table 10. Accountable Person

(XML) Data Model	Element
Namespace (prefix)	nar
Name	accountable
Title	Accountable Person
Definition	An individual accountable for the content in legal terms.
User Note(s)	This property answers to a legal issue. In some countries (e.g. Germany, Sweden) it is needed to designate a person accountable for any legal issue related to the published content. The full translation from the German term is: accountable person in terms of the press law - (For reference in German: Verantwortlich im Sinne des Presserechts -acronym = ViSdP), in Swedish it is called "Ansvarig utgivare". In practice today, a news provider may send out a message each day which indicates the "accountable person". This may work for traditional feed services, but fails with profiled services (content selections) which filter such messages. The solution is to include this information in the Items themselves.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.3 Address Line

Table 11. Address Line

(XML) Data Model	Element
Namespace (prefix)	nar
Name	line
Title	Address Line
Definition	A line of address information, in the format expected by a recipient postal service. City, country area, country and postal code are expressed separately.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**IntlStringType** (page 170)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.4 Affiliation

Table 12. Affiliation

(XML) Data Model	Element
Namespace (prefix)	nar
Name	affiliation
Title	Affiliation
Definition	An affiliation of the person with an organisation.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.5 Audience

Table 13. Audience

(XML) Data Model	Element
Namespace (prefix)	nar
Name	audience
Title	Audience
Definition	An intended audience for the content.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.6 Broader

Table 14. Broader

(XML) Data Model	Element
Namespace (prefix)	nar
Name	broader
Title	Broader
Definition	An identifier of a more generic concept.
User Note(s)	*rank* (available at the PCL only) is suitable for use in a Knowledge Item representing a scheme. It is used when it is important that the Child Elements of a particular term are displayed in a user interface in a predefined order. For example, the major currencies could be given a rank of "1", while all other currencies could be given a rank of "2". Terms of the same rank are ordered alphabetically by name if this is available. If the name is not available, the terms are ordered by code value. Terms without a rank are treated as if they all have the same rank, which is higher than the rank of all other terms. The same concept may have different ranks in different concept trees. A lower rank results in a placement earlier in a display.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.7 By

Table 15. By

(XML) Data Model	Element
Namespace (prefix)	nar
Name	by
Title	By
Definition	A natural-language statement about the creator (author, photographer etc.) of the content.
User Note(s)	The *by* label provides a natural-language statement of the author/creator information (commonly called the byline); it may include a byline title, i.e. the author's job title. Examples of bylines are RUPAK DE CHOWDHURI (a person), isotype.com (a provider) or STR (a stringer). It is up to the provider to decide if the label starts with a word like "By".
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.8 Capacity

Table 16. Capacity

(XML) Data Model	Element
Namespace (prefix)	nar
Name	capacity
Title	Capacity
Definition	Total capacity of the place in natural language.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.9 Catalog

Table 17. Catalog

(XML) Data Model	Element
Namespace (prefix)	nar
Name	catalog
Title	Catalog
Definition	A local or remote catalog.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ additionalInfo (0..1); **IRIType** (page 171); A pointer to some additional information about the Catalog, especially its evolution and latest version.
Child Element(s)	▪ **title** (page 106) (0..unbounded)
	▪ **scheme** (page 145) (1..unbounded)
XML Schema Note(s)	
Example(s)	

10.6.10 Channel for News Message

Table 18. Channel for News Message

(XML) Data Model	Element
Namespace (prefix)	nar
Name	channel
Title	Channel for News Message
Definition	A transmission channel used by the message.
User Note(s)	A channel identifier is used to provide recipients with information for selecting, routing, or handling otherwise the content of the message. The channels represent streams in a multiplex: a message may be sent on different channels – e.g. one for text, one for pictures – and each reception point will be able to filter on channel values. The structure of this string is not specified by the IPTC.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema string
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.11 Concept

Table 19. Concept Definition

(XML) Data Model	Element
Namespace (prefix)	nar
Name	concept
Title	Concept
Definition	A set of properties defining a concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **conceptId** (page 48) (1)
	▪ **type** (page 151) (0..1)
	▪ **name** (page 50) (1..unbounded)
	▪ **definition** (page 47) (0..unbounded)
	▪ **note** (page 121) (0..unbounded)
	▪ **facet** (page 85) (0..unbounded)
	▪ **remoteInfo** (page 141) (0..unbounded)

		Element Name	Page
	▪ **Concept Relationships Group** (page 155) (0..1)	**broader** (0..unbounded)	41
		narrower (0..unbounded)	118
		related (0..unbounded)	137
		sameAs (0..unbounded)	144
		Element Name	Page
	▪ **Entity Details Group** (page 155) (0..1)	**geoAreaDetails** (1)	90
		organisationDetails (1)	125
		personDetails (1)	127
		POIDetails (1)	129
		objectDetails (1)	122

	▪ Extension Point (0..1). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.12 Concept Definition

Table 20. Concept Definition

(XML) Data Model	Element
Namespace (prefix)	nar
Name	definition
Title	Concept Definition
Definition	A natural-language definition of the semantics of the concept. This definition is normative only for the scope of the use of this concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**BlockType** (page 159)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.13 Concept Identifier

Table 21. Concept Identifier

(XML) Data Model	Element
Namespace (prefix)	nar
Name	conceptId
Title	Concept Identifier
Definition	The preferred unambiguous identifier for the concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**ConceptIdType** (page 160)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.14 Concept Item

Table 22. Concept Item

(XML) Data Model	Element
Namespace (prefix)	nar
Name	conceptItem
Title	Concept Item
Definition	An Item containing information about a concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**AnyItemType** (page 157)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **contentMeta** (page 53) (0..1)
	▪ **concept** (page 46) (0..1)
XML Schema Note(s)	
Example(s)	

10.6.15 Concept Name

Table 23. Concept Name

(XML) Data Model	Element
Namespace (prefix)	nar
Name	name
Title	Concept Name
Definition	A natural-language name for the concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**IntlStringType** (page 170).
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.16 Concept Set

Table 24. Concept Set

(XML) Data Model	Element
Namespace (prefix)	nar
Name	conceptSet
Title	Concept Set
Definition	An unordered set of concepts.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **concept** (page 46) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.6.17 Contact Information

Table 25. Contact Information

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contactInfo
Title	Contact Information
Definition	Information to get in contact with the entity expressed by the wrapping property.
User Note(s)	The *role* attribute addresses the role of the full set of contact information with regards to the entity defined by the concept. Examples: "privateOffice" vs "companyOffice" or "GlobalHeadquarters" vs "localHeadquarterUK".
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	Recommended IPTC NewsCodes for the "role" of an event's contact information: http://cv.iptc.org/newscodes/eventcontactinforole/
Attribute(s)	▪ role (0..1); **QCodeType** (page 175); A refinement of the semantics of the set of contact information.
Child Element(s)	▪ **email** (page 82) (0..unbounded)
	▪ **im** (page 100) (0..unbounded)
	▪ **phone** (page 128) (0..unbounded)
	▪ **fax** (page 86) (0..unbounded)
	▪ **web** (page 154) (0..unbounded)
	▪ **address** (page 130) (0..unbounded)
	▪ **note** (page 121) (0..unbounded)
	▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.18 Content Metadata for Concept Items

Table 26. Content Metadata for Concept Items

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contentMeta
Title	Content Metadata for Concept Items
Definition	Content Metadata for a Concept Item
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **icon** (page 95) (0..unbounded); If multiple icon elements are present within a single contentMeta or partMeta property they MUST represent the same visual content, only differentiated by rendition, contentType or format.
XML Schema Note(s)	
Example(s)	

The "Child Element(s)" row contains the following nested table (under Administrative Metadata Group (page 155) (0..1)):

Element Name	Page
audience (0..unbounded)	40
contributor (0..unbounded)	59
creator (0..unbounded)	64
contentCreated (0..1)	66
contentModified (0..1)	67
located (0..unbounded)	114
infoSource (0..unbounded)	101
urgency (0..1)	152

▪ **Administrative Metadata Group** (page 155) (0..1)

▪ Extension Point (0..unbounded). Any set of provider-defined properties.

10.6.19 Content Metadata for Knowledge Items

Table 27. Content Metadata for Knowledge Items

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contentMeta
Title	Content Metadata for Knowledge Items
Definition	Content Metadata for a Knowledge Item.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	• **icon** (page 95) (0..unbounded); If multiple icon elements are present within a single contentMeta or partMeta property they MUST represent the same visual content, only differentiated by rendition, contentType or format.

	Element Name	Page
• **Administrative Metadata Group** (page 155) (0..1)	**audience** (0..1)	40
	contributor (0..unbounded)	59
	creator (0..unbounded)	64
	contentCreated (0..1)	66
	contentModified (0..1)	67
	located (0..unbounded)	114
	infoSource (0..unbounded)	101
	urgency (0..1)	152

	Element Name	Page
• **Knowledge Descriptive Metadata Group** (page 156) (0..1)	**language** (0..unbounded)	109
	description (0..unbounded)	78
	keyword (0..unbounded)	107
	subject (0..unbounded)	148

• Extension Point (0..unbounded). Any set of provider-defined properties.

XML Schema Note(s)	
Example(s)	

10.6.20 Content Metadata for News Items

Table 28. Content Metadata for News Items

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contentMeta
Title	Content Metadata for News Items
Definition	A set of properties about the content.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **icon** (page 95) (0..unbounded); If multiple icon elements are present within a single contentMeta or partMeta property they MUST represent the same visual content, only differentiated by rendition, contentType or format.

	Element Name	Page
▪ **Administrative Metadata Group** (page 155) (0..1)	**audience** (0..unbounded)	40
	contributor (0..unbounded)	59
	creator (0..unbounded)	64
	contentCreated (0..1)	66
	contentModified (0..1)	67
	located (0..unbounded)	114
	infoSource (0..unbounded)	101
	urgency (0..1)	152

	Element Name	Page
▪ **Descriptive Metadata Group** (page 156) (0..1)	**by** (0..unbounded)	42
	creditline (0..unbounded)	65
	dateline (0..unbounded)	76
	description (0..unbounded)	78
	genre (0..unbounded)	88
	headline (0..unbounded)	94
	keyword (0..unbounded)	107
	language (0..unbounded)	109
	slugline (0..unbounded)	147
	subject (0..unbounded)	148

	▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.21 Content Metadata for Package Items

Table 29. Content Metadata for Package Items

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contentMeta
Title	Content Metadata for Package Items
Definition	A set of properties about the content.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	

Child Element(s):

- **icon** (page 95) (0..unbounded); If multiple icon elements are present within a single contentMeta or partMeta property they MUST represent the same visual content, only differentiated by rendition, contentType or format.

Administrative Metadata Group (page 155) (0..1)	Element Name	Page
	audience (0..unbounded)	40
	contributor (0..unbounded)	59
	creator (0..unbounded)	64
	contentCreated (0..1)	66
	contentModified (0..1)	67
	located (0..unbounded)	114
	infoSource (0..unbounded)	101
	urgency (0..1)	152

Descriptive Metadata Group (page 156) (0..1)	Element Name	Page
	by (0..unbounded)	42
	creditline (0..unbounded)	65
	dateline (0..unbounded)	76
	description (0..unbounded)	78
	genre (0..unbounded)	88
	headline (0..unbounded)	94
	keyword (0..unbounded)	107
	language (0..unbounded)	109
	slugline (0..unbounded)	147
	subject (0..unbounded)	148

- Extension Point (0..unbounded). Any set of provider-defined properties.

XML Schema Note(s)	
Example(s)	

10.6.22 Content Provider

Table 30. Content Provider

(XML) Data Model	Element
Namespace (prefix)	nar
Name	provider
Title	Provider
Definition	The party responsible for the management and the release of the Item.
User Note(s)	This corresponds to the publisher of the Item.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.23 Content Set

Table 31. Content Set

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contentSet
Title	Content Set
Definition	A set of alternate renditions of the Item content.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ original (0..1); XML Schema idref; A local reference to the original piece of content, from which all renditions have been derived.
Child Element(s)	▪ **inlineXML** (page 98) (0..unbounded) Or ▪ **inlineData** (page 96) (0..unbounded) Or ▪ **remoteContent** (page 139) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.6.24 Contributor

Table 32. Contributor

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contributor
Title	Contributor
Definition	A party (person or organisation) which modified or enhanced the content, preferably the name of a person.
User Note(s)	One may specify the role the party plays in the creation of the content (e.g. a caption writer for photos) at the PCL.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.25 Copyright Holder

Table 33. Copyright Holder

(XML) Data Model	Element
Namespace (prefix)	nar
Name	copyrightHolder
Title	Copyright Holder
Definition	The person or organisation claiming the intellectual property for the content.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.26 Copyright Notice

Table 34. Copyright Notice

(XML) Data Model	Element
Namespace (prefix)	nar
Name	copyrightNotice
Title	Copyright Notice
Definition	Any necessary copyright notice for claiming the intellectual property for the resource.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.27 Country

Table 35. Country

(XML) Data Model	Element
Namespace (prefix)	nar
Name	country
Title	Country
Definition	A country, part of the address.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.28 Country Area

Table 36. Country Area

(XML) Data Model	Element
Namespace (prefix)	nar
Name	area
Title	Country Area
Definition	A subdivision of a country, part of the address.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.29 Creator

Table 37. Creator

(XML) Data Model	Element
Namespace (prefix)	nar
Name	creator
Title	Creator
Definition	A party (person or organisation) which created the resource.
User Note(s)	One may specify the role the party plays in the creation of the content (e.g. a caption writer for photos) at the PCL.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.30 Credit Line

Table 38. Credit Line

(XML) Data Model	Element
Namespace (prefix)	nar
Name	creditline
Title	Credit Line
Definition	A free-text expression of the credit(s) for the content.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	IntlStringType
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.31 Date Content Created

Table 39. Date Content Created

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contentCreated
Title	Date Content Created
Definition	The date (and optionally the time with the time zone) at which the content was created.
User Note(s)	In the case of a photo or live footage for audio and video, this date (and time) is always the same as the date (and time) of the event covered by the content. In the case of text and any audio and video report about an event, this date (and time) can be different from the date (and time) of the event covered by the content. This date (and time) may also be different from the date (and time) of the creation of an Item holding the content.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**TruncatedDateTimePropType** (page 178)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.32 Date Content Modified

Table 40. Date Content Modified

(XML) Data Model	Element
Namespace (prefix)	nar
Name	contentModified
Title	Date Content Modified
Definition	The date (and optionally the time with the time zone) at which the content was last modified.
User Note(s)	The value of this property should be updated each time the content is modified in any manner, but should not be updated if only metadata are changed.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**TruncatedDateTimePropType** (page 178)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.33 Date Item Embargo Ends

Table 41. Date Item Embargo Ends

(XML) Data Model	Element
Namespace (prefix)	nar
Name	embargoed
Title	Date Item Embargo Ends
Definition	The date and time (with the time zone) before which all versions of the Item are embargoed. If the element is absent, the Item is not embargoed. If the element exists but is empty the end of the embargo is defined by the language in an **edNote** (page 80) element.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**DateTimeOrNullPropType** (page 164)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.34 Date Item First Created

Table 42. Date Item First Created

(XML) Data Model	Element
Namespace (prefix)	nar
Name	firstCreated
Title	Date Item First Created
Definition	The date and time (with the time zone) on which the first version of the Item was created.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**DateTimePropType** (page 165)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.35 Date Item Version Created

Table 43. Date Item Version Created

(XML) Data Model	Element
Namespace (prefix)	nar
Name	versionCreated
Title	Date Item Version Created
Definition	The date and time (with the time zone) on which the current version of the Item was created.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**DateTimePropType** (page 165)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.36 Date of Birth

Table 44. Date of Birth

(XML) Data Model	Element
Namespace (prefix)	nar
Name	born
Title	Date of Birth
Definition	The date of birth of the person.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**TruncatedDateTimePropType** (page 178)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.37 Date of Death

Table 45. Date of Death

(XML) Data Model	Element
Namespace (prefix)	nar
Name	died
Title	Date of Death
Definition	The date of death of the person.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**TruncatedDateTimePropType** (page 178)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.38 Date of Dissolution

Table 46. Date of Dissolution

(XML) Data Model	Element
Namespace (prefix)	nar
Name	dissolved
Title	Date of Dissolution
Definition	The date of dissolution of the organisation.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**TruncatedDateTimePropType** (page 178)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.39 Date of Foundation

Table 47. Date of Foundation

(XML) Data Model	Element
Namespace (prefix)	nar
Name	founded
Title	Date of Foundation
Definition	The date of foundation/establishment of the organisation.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**TruncatedDateTimePropType** (page 178)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.40 Date of Transmission

Table 48. Date of Transmission

(XML) Data Model	Element
Namespace (prefix)	nar
Name	sent
Title	Date of Transmission
Definition	The date and time (with the time zone) of transmission of the message.
User Note(s)	May not be updated in case of retransmission of the message.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema dateTime
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.41 Dateline

Table 49. Dateline

(XML) Data Model	Element
Namespace (prefix)	nar
Name	dateline
Title	Dateline
Definition	A natural-language statement of the date and/or place of creation of the content.
User Note(s)	The dateline provides a natural-language statement of the date and/or place of the news content creation, to be displayed in situations where an abstract of the content is shown (case of search results) or the content is remote. Traditionally a dateline indicates when and where news content is created, not necessarily the time and place relative to the news event. As an example a dateline BAGHDAD, March 26, 2007 (AFP) could head a story about blast in Mosul, because the story was actually written in Baghdad. Also, by tradition a dateline will follow the stylebook of the information provider and possibly leave out certain time and location information that could be useful for specifying searches of a database. Editorial policy dictates the dateline; it is not automatically derivable from other markup (location, date, etc.). The dateline should not end with a separating character (of the kind that separates the dateline from the first sentence in a traditional wire story).
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.42 Recurrence Group

This group of properties defines the information required to specify a recurrence set. The recurrence set is the complete set of recurrence instances for a calendar component. The model follows the iCalendar specification [RFC2445].

At least one *rDate* or *rRule* element MUST be present. These elements MUST come first in the group. Then the *exDate* and *exRule* elements MAY be inserted in any order.

Table 50. Recurrence Group Elements

Element Title	Element Name	Card	Described on Page
Recurrence Date	**rDate**	(0..unbounded)	135
Recurrence Rule	**rRule**	(0..unbounded)	136
Exclusion Date	**exDate**	(0..unbounded)	83
Exclusion Rule	**exRule**	(0..unbounded)	84

10.6.43 Date Resource Created

Table 51. Date Resource Created

(XML) Data Model	Element
Namespace (prefix)	nar
Name	created
Title	Date Resource Created
Definition	The date (and optionally the time with the time zone) on which the resource was created.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**TruncatedDateTimePropType** (page 178)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.44 Description

Table 52. Description

(XML) Data Model	Element
Namespace (prefix)	nar
Name	description
Title	Description
Definition	A free-form textual description of the content of the item. (For a Knowledge Item the content is its set of concepts as a whole.)
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**BlockType** (page 159)
Internally Ctrl Values	
Externally Ctrl Values	Recommended IPTC NewsCodes for the *role* attribute: http://cv.iptc.org/newscodes/descriptionrole/
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.45 Destination

Table 53. Destination

(XML) Data Model	Element
Namespace (prefix)	nar
Name	destination
Title	Destination
Definition	The point(s) of destination of the message.
User Note(s)	In a broadcast delivery system, the destination is a group of reception points (using a provider-specific syntax, often geographically oriented). This is a way to address customers. Examples are "England", "USA", "Austria/Vienna", "France/Paris/LeParisien". The structure of this string is not specified by the IPTC.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema string
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.46 Editorial Note

Table 54. Editorial Note

(XML) Data Model	Element
Namespace (prefix)	nar
Name	edNote
Title	Editorial Note
Definition	A note addressed to the editorial people receiving and processing the Item. If edNote is a child element to plannedCoverage (EventsML-G2) this property provides additional natural language information about the planned coverage.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**BlockType** (page 159)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.47 Editorial Service

Table 55. Editorial Service

(XML) Data Model	Element
Namespace (prefix)	nar
Name	service
Title	Editorial Service
Definition	An editorial service to which an Item is assigned to by its provider. If service is a child element to plannedCoverage (EventsML-G2), this property indicates by which editorial service the planned G2 item(s) will be published.
User Note(s)	The values of this property are defined by each provider, and are often associated with the notion of a desk or a feed. Some examples are a "French wire service", an "international picture service" or a "mobile news service".
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**QualPropType** (page 176)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.48 Email Address

Table 56. Email Address

(XML) Data Model	Element
Namespace (prefix)	nar
Name	email
Title	Email Address
Definition	An email address.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**ElectronicAddressType** (page 166)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.49 Exclusion Date

Table 57. Exclusion Date

(XML) Data Model	Element
Namespace (prefix)	nar
Name	exDate
Title	Exclusion Date
Definition	An explicit date (and optionally time with the time zone) to be excluded from the recurrence set.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**DateOptTimePropType** (page 162)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.50 Exclusion Rule

Table 58. Exclusion Rule

(XML) Data Model	Element
Namespace (prefix)	nar
Name	exRule
Title	Exclusion Rule
Definition	A rule of recurrence exclusion.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**RecurrenceRuleType** (page 177)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.51 Facet

Table 59. Facet

(XML) Data Model	Element
Namespace (prefix)	nar
Name	facet
Title	Facet
Definition	An intrinsic property of the concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	The default value and additional values for the *rel* attribute are defined by the IPTC Facet Relationship NewsCodes - http://cv.iptc.org/newscodes/facetrelation/
Attribute(s)	▪ rel (0..1); **QCodeType** (page 175); The identifier of the relationship between the current concept (containing the facet) and the concept identified by the facet value. The default value for rel is the "IsA" relationship, this applies also if the *rel* attribute is omitted.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.52 Fax Number

Table 60. Fax Number

(XML) Data Model	Element
Namespace (prefix)	nar
Name	fax
Title	Fax Number
Definition	An international fax number.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**ElectronicAddressType** (page 166)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.53 File Name

Table 61. File Name

(XML) Data Model	Element
Namespace (prefix)	nar
Name	filename
Title	File Name
Definition	The recommended file name for this Item.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	XML Schema normalizedString
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.54 Genre

Table 62. Genre

(XML) Data Model	Element
Namespace (prefix)	nar
Name	genre
Title	Genre
Definition	A nature, intellectual or journalistic form of the news content.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.55 Geographic Position

Table 63. Geographic Position

(XML) Data Model	Element
Namespace (prefix)	nar
Name	position
Title	Geographic Position
Definition	The geographic coordinates of the location.
User Note(s)	These properties follow the syntax used by the major geocoders on the Web. Latitudes north of the equator shall be designated by use of the plus sign (+), latitudes south of the equator shall be designated by use of the minus sign (-). The equator shall be designated by use of the plus sign (+). Longitudes east of Greenwich shall be designated by use of the plus sign (+), longitudes west of Greenwich shall be designated by use of the minus sign (-). The Prime Meridian shall be designated by use of the plus sign (+). The 180th meridian shall be designated by use of the minus sign (-). The altitude is given in meters. A positive integer means a position above the zero elevation, a negative value below the zero elevation. In the absence of the *gpsdatum* attribute, WGS84 is the default system.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ latitude (1); XML Schema decimal; The latitude in decimal degrees (Positive value = northern latitude, negative value = southern latitude). ▪ longitude (1); XML Schema decimal; The longitude in decimal degrees (Positive value = eastern longitude, negative value = western longitude). ▪ altitude (0..1); XML Schema integer; The altitude in meters above the zero elevation of the reference system (sea level). ▪ gpsdatum (0..1); XML Schema string; The GPS datum associated with the measure.
Child Element(s)	▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.56 Geopolitical Area Details

Table 64. Geopolitical Area Details

(XML) Data Model	Element
Namespace (prefix)	nar
Name	geoAreaDetails
Title	Geopolitical Area Details
Definition	A set of properties specific for a geopolitical area.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **position** (page 89) (0..1)
	▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.57 Group

Table 65. Group

(XML) Data Model	Element
Namespace (prefix)	nar
Name	group
Title	Group
Definition	A mixed set of group references and links.
User Note(s)	▪ Group Mode: By default the group is "complementary and unordered". ▫ Complementary and Unordered: To be used for any kind of supporting content that does not require a sequence to be specified. ▫ Complementary and Ordered: The group starts with the first child of the group. To be used for any kind of content which must be displayed or consumed in a particular sequence, expressed by the order of the child elements of the group. The semantics of the role attribute value determine the required processing. ▫ Alternatives: To be used if a group contains equivalent pieces of content (e.g. translations of the same news story into different languages). The recipient may pick one or more of these. ▪ Group References and Item References: Can be included in any order, and this order may be relevant or not, depending the value of the mode attribute. Each link aggregates an external resource (Item or Web resource) to the package. Optionally, it indicates the relationship between the group and the target resource plus some additional hints about the resource itself.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	Mandatory IPTC NewsCodes for the *mode* attribute: http://cv.iptc.org/newscodes/pkggroupmode/
Attribute(s)	▪ id (1); XML Schema id; The local identifier of the group. ▪ role (1); **QCodeType** (page 175); The part this group plays within its container. ▪ mode (0..unbounded); **QCodeType** (page 175); An indication whether the elements in the group are complementary and unordered, complementary and ordered or a set of alternative elements.
Child Element(s)	▪ **groupRef** (page 92) (0..unbounded) ▪ **itemRef** (page 104) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.6.58 Group Reference

Table 66. Group Reference

(XML) Data Model	Element
Namespace (prefix)	nar
Name	groupRef
Title	Group Reference
Definition	A reference to a group local to the package.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ idref (1); XML Schema idref; The reference to the id of a local group.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.59 Group Set

Table 67. Group Set

(XML) Data Model	Element
Namespace (prefix)	nar
Name	groupSet
Title	Group Set
Definition	A hierarchical set of groups.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ root (1); XML Schema idref; The reference to a local group acting as the root of the hierarchy of groups.
Child Element(s)	▪ **group** (page 91) (1..unbounded)
XML Schema Note(s)	
Example(s)	

10.6.60 Headline

Table 68. Headline

(XML) Data Model	Element
Namespace (prefix)	nar
Name	headline
Title	Headline
Definition	A brief and snappy introduction to the news content, designed to catch the reader's attention.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.61 Icon

Table 69. Icon

(XML) Data Model	Element		
Namespace (prefix)	nar		
Name	icon		
Title	Icon		
Definition	An iconic visual representation of the content.		
User Note(s)			
Implementation Note(s)			
XML Schema Spec	At: CCL		
Datatype			
Internally Ctrl Values			
Externally Ctrl Values			
Attribute(s)	▪ **targetResourceAttributes** (page 182)	**Name**	**Datatype**
		href (0..1)	IRIType
		residref (0..1)	XML Schema string
		version (0..1)	XML Schema positiveInteger
		contenttype (0..1)	XML Schema string
		format (0..1)	QCodeType
		size (0..1)	XML Schema non NegativeInteger
Child Element(s)			
XML Schema Note(s)			
Example(s)			

10.6.62 Inline Data (NewsML-G2 Specific)

Table 70. Inline Data (NewsML-G2 Specific)

(XML) Data Model	Element
Namespace (prefix)	nar
Name	inlineData
Title	Inline Data (NewsML-G2 Specific)
Definition	The encoding applied to the content before inclusion.
User Note(s)	
Implementation Note(s)	For the encoding attribute at the CCL only the QCode for "base64" may be used. If the attribute does not exist, this QCode must be assumed as default.. In the absence of the encoding attribute, the content must be plain text, and the content type must be set accordingly.
XML Schema Spec	At CCL
Datatype	XML schema string
Internally Ctrl Values	
Externally Ctrl Values	

Table 70. Inline Data (NewsML-G2 Specific) (Continued)

Attribute(s)		Name	Datatype
	▪ encoding (0..1); **QCodeType** (page 175); Specifies the encoding applied to the content before inclusion in the content.		
	▪ contenttype (0..1); XML Schema string; The IANA (Internet Assigned Numbers Authority) MIME type of the target resource.		
	▪ format (0..1); QCodeType; A refinement of a generic content type (i.e. IANA MIME type).		
	▪ **newsContentAttributes** (page 181)l	**Name**	**Datatype**
		id (0..1)	XML Schema ID
		rendition (0..1)	QCodeType
	▪ **newsContentCharacteristics** (page 182)	**Name**	**Datatype**
		Word Count	XML Schema nonNegativeInteger
		Image Width	XML Schema nonNegativeInteger
		Image Width Unit	QCodeType
		Image Height	XML Schema nonNegativeInteger
		Image Height Unit	QCodeType
		Image Orientation	XML Schema nonNegativeInteger
		Image Colour Space	QCodeType
		Resolution	XML Schema positiveInteger
		Duration	XML Schema nonNegativeInteger
		Unit of Duration	QCodeType
		Audio Codec	QCodeType
		Audio Bit Rate	XML Schema positiveInteger
		Audio Variable Bit Rate flag	XML Schema boolean
		Audio Sample Size	XML Schema positiveInteger
		Audio Sample Rate	XML Schema positiveInteger
		Audio Channels	QCodeType
		Video Codec	QCodeType
		Video Average Bit Rate	XML Schema positiveInteger
		Video Variable Bit Rate flag	XML Schema boolean
		Video Frame Rate	XML Schema positiveInteger
		Video Scan Technique	enumeration progressive/interlaced
		Video Aspect Ratio	XML Schema nomalizedString
		Video Sampling Method	XML Schema nomalizedString
	▪ **i18nAttributes** (page 181)	**Name**	**Datatype**
		xml:lang (0..1)	XML Schema language
		dir (0..1)	XML Schema string: enumeration *ltr*, *rtl*.
Child Element(s)			
XML Schema Note(s)			
Example(s)			

10.6.63 Inline XML (NewsML-G2 Specific)

Table 71. Inline XML (NewsML-G2 Specific)

(XML) Data Model	Element
Namespace (prefix)	nar
Name	inlineXML
Title	Inline XML (NewsML-G2 Specific)
Definition	A rendition of the content using an XML language.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	

Table 71. Inline XML (NewsML-G2 Specific) (Continued)

		Name	Datatype
Attribute(s)	▪ contenttype (0..1); XML Schema string; The IANA (Internet Assigned Numbers Authority) MIME type of the target resource.		
	▪ format (0..1); QCodeType; Refinement of a generic content type (i.e. IANA MIME type).		
	▪ **newsContentAttributes** (page 181)	**Name**	**Datatype**
		id (0..1)	XML Schema ID
		rendition (0..1)	QCodeType
	▪ **newsContentCharacteristics** (page 182)	**Name**	**Datatype**
		Word Count	XML Schema nonNegativeInteger
		Image Width	XML Schema nonNegativeInteger
		Image Width Unit	QCodeType
		Image Height	XML Schema nonNegativeInteger
		Image Height Unit	QCodeType
		Image Orientation	XML Schema nonNegativeInteger
		Image Colour Space	QCodeType
		Resolution	XML Schema positiveInteger
		Duration	XML Schema nonNegativeInteger
		Unit of Duration	QCodeType
		Audio Codec	QCodeType
		Audio Bit Rate	XML Schema positiveInteger
		Audio Variable Bit Rate flag	XML Schema boolean
		Audio Sample Size	XML Schema positiveInteger
		Audio Sample Rate	XML Schema positiveInteger
		Audio Channels	QCodeType
		Video Codec	QCodeType
		Video Average Bit Rate	XML Schema positiveInteger
		Video Variable Bit Rate flag	XML Schema boolean
		Video Frame Rate	XML Schema positiveInteger
		Video Scan Technique	enumeration progressive/interlaced
		Video Aspect Ratio	XML Schema nomalizedString
		Video Sampling Method	XML Schema nomalizedString
	▪ **i18nAttributes** (page 181)	**Name**	**Datatype**
		xml:lang (0..1)	XML Schema language
		dir (0..1)	XML Schema string: enumeration *ltr*, *rtl*.
Child Element(s)	▪ Plug-in Point (0..1). XML content from any namespace.		
XML Schema Note(s)			
Example(s)			

10.6.64 Instant Messaging Address

Table 72. Instant Messaging Address

(XML) Data Model	Element
Namespace (prefix)	nar
Name	im
Title	Instant Messaging Address
Definition	An address of an instant messaging system.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**ElectronicAddressType** (page 166)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.65 Information Source

Table 73. Information Source

(XML) Data Model	Element
Namespace (prefix)	nar
Name	infoSource
Title	Information Source
Definition	A party (person or organisation) which originated some information used to create or enhance the content.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.66 Item Class

Table 74. Item Class

(XML) Data Model	Element
Namespace (prefix)	nar
Name	itemClass
Title	Item Class
Definition	Indicates the nature of the Item.
User Note(s)	This property gives a hint on the nature of the Item. IPTC values for News Items correspond to the media type of the original content component, i.e. "text", "photo", etc. Concept Items adopt the static value *concept*. The class of a Package Item reflects the nature of the items it contains, i.e. either one of the values above or the value "composite" which indicates that the package handles items of different natures. A recipient system may use this information to make a coarse selection of Items, based on their nature, without having to inspect the structure.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**QualPropType** (page 176)
Internally Ctrl Values	
Externally Ctrl Values	Mandatory IPTC NewsCodes for News Items or Package Items: http://cv.iptc.org/newscodes/ninature/ Mandatory IPTC NewsCodes for Concept Items, Knowledge Items or Package Items: http://cv.iptc.org/newscodes/cinature/
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.67 Item Metadata

Table 75. Item Metadata

(XML) Data Model	Element		
Namespace (prefix)	nar		
Name	itemMeta		
Title	Item Metadata		
Definition	A set of properties directly associated with the Item.		
User Note(s)			
Implementation Note(s)			
XML Schema Spec	At: CCL		
Datatype			
Internally Ctrl Values			
Externally Ctrl Values			
Attribute(s)			
Child Element(s)	▪ **Item Management Group** (page 156) (1)	**Element Name**	**Page**
		provider (1)	57
		embargoed (0..1)	68
		firstCreated (0..1)	69
		versionCreated (1)	70
		edNote (0..unbounded)	80
		service (0..unbounded)	81
		filename (0..1)	87
		itemClass (1)	102
		pubStatus (0..1)	134
		role (0..1)	143
		title (0..unbounded)	106
	▪ **link** (page 111) (0..unbounded)		
	▪ Extension Point (0..unbounded). Any set of provider-defined properties.		
XML Schema Note(s)			
Example(s)			

10.6.68 Item Reference

Table 76. Item Reference

(XML) Data Model	Element
Namespace (prefix)	nar
Name	itemRef
Title	Item Reference
Definition	A reference to a target Item or Web resource.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LinkType** (page 173)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.69 Item Set

Table 77. Item Set

(XML) Data Model	Element
Namespace (prefix)	nar
Name	itemSet
Title	Item Set
Definition	A set of Items.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **newsItem** (page 119) (1..unbounded) ▪ **conceptItem** (page 49) (1..unbounded) ▪ **packageItem** (page 126) (1..unbounded) ▪ **knowledgeItem** (page 108) (0..unbounded)
XML Schema Note(s)	To allow the validation of the structure beyond the root elements of the different items the extension point "any" for the nar XML namespace is the only child element. This allows schema based validation of the content of the items as the validation of the extension point is set to "lax".
Example(s)	

10.6.70 Item Title

Table 78. Item Title

(XML) Data Model	Element
Namespace (prefix)	nar
Name	title
Title	Item Title
Definition	A short, natural-language name for the Item.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.71 Keyword

Table 79. Keyword

(XML) Data Model	Element
Namespace (prefix)	nar
Name	keyword
Title	Keyword
Definition	Free-text term to be used for indexing or finding the content by text-based search engines.
User Note(s)	This property may be used in parallel with other properties to describe content like subject or genre which use QCodes or literals to identify an assigned concept. Providers should define if and how the values of keyword properties contained in their items complement, or overlap with, the values of other properties such as subject or genre.
Implementation Note(s)	Be aware of the lexical space restrictions for an XML Schema normalizedString - see XML Schema specifications.
XML Schema Spec	At: CCL
Datatype	**IntlStringType** (page 170)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ role (0..1); **QCodeType** (page 175); A refinement of the semantics of the keyword
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.72 Knowledge Item

Table 80. Knowledge Item

(XML) Data Model	Element
Namespace (prefix)	nar
Name	knowledgeItem
Title	Knowledge Item
Definition	An Item used for collating a set of concept definitions to form the physical representation of a controlled vocabulary.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**AnyItemType** (page 157)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **contentMeta** (page 54) (0..1) ▪ **conceptSet** (page 51) (0..1)
XML Schema Note(s)	
Example(s)	

10.6.73 Language

Table 81. Language

(XML) Data Model	Element
Namespace (prefix)	nar
Name	language
Title	Language
Definition	A language associated with the content. For news this is a language used by the news content, for events this is a language used at this event, for Knowledge Items this is the major language used to describe the concepts
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	*tag* values must be valid BCP 47 language tags.
Attribute(s)	▪ tag (1); XML Schema language; Indicator of the language.
Child Element(s)	▪ **name** (page 50) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.6.74 Line Break

Table 82. Line Break

(XML) Data Model	Element
Namespace (prefix)	nar
Name	br
Title	Line Break
Definition	A line break.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	Empty element
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.75 Link

Table 83. Link

(XML) Data Model	Element
Namespace (prefix)	nar
Name	link
Title	Link
Definition	A link from the current Item to a target Item or Web resource.
User Note(s)	They are different variants of links: Links may allow for navigation from a newsItem to another related Item or a Web resource, and its title be displayed as supplemental information to the final user. Example: a newsItem representing a section of a transcript (a "take" in the news language) may be linked to the previous and next take; an article about a person may be linked to the biography of this person. Links may express a parent-child relationship. Example: a newsItem representing an article may be linked to the article it is a translation of; a wrap-up may be linked to the previous stories used as source material for the article; a cropped picture may be linked to its source picture. Links may express dependency on external Items which are required in order to fully present the composite content of the Item. If some target Items are not retrievable, then the recipient processor should fail gracefully. The most obvious example is a newsItem representing an illustrated article. The textual content of the newsItem (usually formatted as NITF or XHTML) includes a reference to a photo which is represented by another newsItem. As the NAR recipient processor is content agnostic, it cannot infer this dependency from processing the content. A dependency link from the article to the picture indicates that the recipient processor must retrieve the target newsItem before the article can be fully displayed.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LinkType** (page 173)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.76 Link Title

Table 84. Link Title

(XML) Data Model	Element
Namespace (prefix)	nar
Name	title
Title	Link Title
Definition	A short natural language name describing the link and displayed to the users.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.77 Locality

Table 85. Locality

(XML) Data Model	Element
Namespace (prefix)	nar
Name	locality
Title	Locality
Definition	A city/town/village etc. part of the address.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.78 Located

Table 86. Located

(XML) Data Model	Element
Namespace (prefix)	nar
Name	located
Title	Located
Definition	A location from which the content originates.
User Note(s)	This information applies especially to news, and may also be expressed as free text in the "dateline" of a story, along with a date of content creation and the name of the content provider. The rules for determining the location are provider-dependent. The location is typically determined differently for different types of content: - Text: The practices of news providers either identify the location the content relates to or the location the content was created by a reporter or a writer. If a correspondent is resident in town A but writes about an event in town B the name of town A or B can be used. But the provider's policy should be available as written document. - Photo: The location of origin of content is the place shown in the photo image. - Graphics: The location of origin of content should be the editorial office from where this graphics are distributed. - Audio and video: In the case of raw footage the location of origin of the content should be the place of event, if people can be heard/are shown from different places the news provider can decide by its own policy, but this policy should be available as written document.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.79 Location

Table 87. Location

(XML) Data Model	Element
Namespace (prefix)	nar
Name	location
Title	Location
Definition	A location (geographical area or point of interest).
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.80 Location Details

Table 88. Location Details

(XML) Data Model	Element
Namespace (prefix)	nar
Name	details
Title	Location Details
Definition	Detailed information about the precise location of the point of interest.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**BlockType** (page 159)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.81 Message Header

Table 89. Message Header

(XML) Data Model	Element
Namespace (prefix)	nar
Name	header
Title	Message Header
Definition	A set of properties facilitating the exchange of Items.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **sent** (page 75) (1); May not be updated in case message retransmission.
	▪ **sender** (page 146) (0..1); The structure of this string is not specified by the IPTC. Best practice is to identify a sender by its domain name.
	▪ **transmitId** (page 150) (0..1); No two News Messages sent by the same sender on the same date can have the same identifier. In case of retransmission it is not required to update this identifier. This string structure is not specified by the IPTC.
	▪ **priority** (page 132) (0..1)
	▪ **origin** (page 124) (0..1); This string structure is not specified by the IPTC.
	▪ **destination** (page 79) (0..unbounded)
	▪ **channel** (page 45) (0..unbounded); A channel identifier is used to provide recipients with information on which select, route, or otherwise handle the content of the message. The channels represent streams in a multiplex: a message may be sent on different channels – e.g. one for text, one for pictures – and each reception point will be able to filter on channel values. This string structure is not specified by the IPTC.
	▪ **timestamp** (page 149) (0..unbounded)
	▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.82 Narrower

Table 90. Narrower

(XML) Data Model	Element
Namespace (prefix)	nar
Name	narrower
Title	Narrower
Definition	An identifier of a more specific concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.83 News Item (NewsML-G2 Specific)

Table 91. News Item (NewsML-G2 Specific)

(XML) Data Model	Element
Namespace (prefix)	nar
Name	newsItem
Title	News Item (NewsML-G2 Specific)
Definition	An Item containing news-related information.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**AnyItemType** (page 157)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **contentMeta** (page 55) (0..1)
	▪ **contentSet** (page 58) (0..1)
XML Schema Note(s)	
Example(s)	

10.6.84 News Message

Table 92. News Message

(XML) Data Model	Element
Namespace (prefix)	nar
Name	newsMessage
Title	News Message
Definition	A container to exchange one or more items.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **header** (page 117) (1)
	▪ **itemSet** (page 105) (1)
XML Schema Note(s)	
Example(s)	

10.6.85 Note

Table 93. Note

(XML) Data Model	Element
Namespace (prefix)	nar
Name	note
Title	Note
Definition	Additional natural-language information about the concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**BlockType** (page 159)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.86 Object Details

Table 94. Object Details

(XML) Data Model	Element
Namespace (prefix)	nar
Name	objectDetails
Title	Object Details
Definition	A set of properties representing an object.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **created** (page 77) (0..1) ▪ **creator** (page 64) (0..unbounded) ▪ **copyrightNotice** (page 61) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.6.87 Opening Hours

Table 95. Opening Hours

(XML) Data Model	Element
Namespace (prefix)	nar
Name	openHours
Title	Opening Hours
Definition	Opening-hours of the place, in natural language.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.88 Origin

Table 96. Origin

(XML) Data Model	Element
Namespace (prefix)	nar
Name	origin
Title	Origin
Definition	The point of origin of the transmission of the message.
User Note(s)	This string's structure is not specified by the IPTC.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema string
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.89 Organisation Details

Table 97. Organisation Details

(XML) Data Model	Element
Namespace (prefix)	nar
Name	organisationDetails
Title	Organisation Details
Definition	A group of properties specific to an organisation.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **founded** (page 74) (0..1) ▪ **dissolved** (page 73) (0..1) ▪ **location** (page 115) (0..unbounded) ▪ **contactInfo** (page 52) (0..unbounded) ▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.90 Package Item

Table 98. Package Item

(XML) Data Model	Element
Namespace (prefix)	nar
Name	packageItem
Title	Package Item
Definition	An Item used for packaging references to other Items and Web resources.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**AnyItemType** (page 157)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **contentMeta** (page 56) (0..1) ▪ **groupSet** (page 93) (0..1)
XML Schema Note(s)	
Example(s)	

10.6.91 Person Details

Table 99. Person Details

(XML) Data Model	Element
Namespace (prefix)	nar
Name	personDetails
Title	Person Details
Definition	A group of properties specific to a person.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **born** (page 71) (0..1) ▪ **died** (page 72) (0..1) ▪ **affiliation** (page 39) (0..unbounded) ▪ **contactInfo** (page 52) (0..unbounded) ▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.92 Phone Number

Table 100. Phone Number

(XML) Data Model	Element
Namespace (prefix)	nar
Name	phone
Title	Phone Number
Definition	An international phone number.
User Note(s)	The *tech* attribute indicates a land-line, cellular etc., service.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**ElectronicAddressType** (page 166)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.93 POI Details

Table 101. POI Details

(XML) Data Model	Element
Namespace (prefix)	nar
Name	POIDetails
Title	POI Details
Definition	A group of properties specific to a point of interest.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **position** (page 89) (0..1) ▪ **openHours** (page 123) (0..1) ▪ **capacity** (page 43) (0..1) ▪ **access** (page 36) (0..unbounded) ▪ **details** (page 116) (0..unbounded) ▪ **contactInfo** (page 52) (0..unbounded) ▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.94 Postal Address

Table 102. Postal Address

(XML) Data Model	Element
Namespace (prefix)	nar
Name	address
Title	Postal Address
Definition	A postal address.
User Note(s)	A special value of the role attribute may indicate that this information is not used to make contacts but e.g. is the registered address of a company.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ role (0..1); **QCodeType** (page 175); A refinement of the semantics of the postal address.
Child Element(s)	▪ **line** (page 38) (0..unbounded)
	▪ **locality** (page 113) (0..1)
	▪ **area** (page 63) (0..1)
	▪ **country** (page 62) (0..1)
	▪ **postalCode** (page 131) (0..1)
XML Schema Note(s)	
Example(s)	

10.6.95 Postal Code

Table 103. Postal Code

(XML) Data Model	Element
Namespace (prefix)	nar
Name	postalCode
Title	Postal Code
Definition	A postal code, part of the address.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**IntlStringType** (page 170)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.96 Priority

Table 104. Priority

(XML) Data Model	Element
Namespace (prefix)	nar
Name	priority
Title	Priority
Definition	The priority of this message in the overall transmission process. A value of 1 corresponds to the highest priority, a value of 9 to the lowest.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**Int1To9Type** (page 169)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.97 Property Value Name

Table 105. Property Value Name

(XML) Data Model	Element
Namespace (prefix)	nar
Name	name
Title	Property Value Name
Definition	A natural-language name of the concept assigned as property value.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**IntlStringType** (page 170)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.98 Publish Status

Table 106. Publish Status

(XML) Data Model	Element
Namespace (prefix)	nar
Name	pubStatus
Title	Publish Status
Definition	The publishing status of the Item. If no value is provided the default value is "usable".
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**QualPropType** (page 176)
Internally Ctrl Values	
Externally Ctrl Values	Mandatory IPTC NewsCodes: http://cv.iptc.org/newscodes/pubstatusg2/
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.99 Recurrence Date

Table 107. Recurrence Date

(XML) Data Model	Element
Namespace (prefix)	nar
Name	rDate
Title	Recurrence Date
Definition	An explicit date (and optionally time with the time zone) of recurrence.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**DateOptTimePropType** (page 162)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.100 Recurrence Rule

Table 108. Recurrence Rule

(XML) Data Model	Element
Namespace (prefix)	nar
Name	rRule
Title	Recurrence Rule
Definition	A rule of recurrence.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**RecurrenceRuleType** (page 177)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.101 Related Concept

Table 109. Related Concept

(XML) Data Model	Element
Namespace (prefix)	nar
Name	related
Title	Related Concept
Definition	An identifier of a related concept, where the relationship is different from elements *sameAs*, *broader*, or *narrower*.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.102 Remote Catalog Reference

Table 110. Remote Catalog Reference

(XML) Data Model	Element
Namespace (prefix)	nar
Name	catalogRef
Title	Remote Catalog Reference
Definition	A reference to a remote catalog.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ href (1); **IRIType** (page 171); A hyperlink to a remote catalog.
Child Element(s)	▪ **title** (page 106) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.6.103 Remote Content (NewsML-G2 Specific)

Table 111. Remote Content (NewsML-G2 Specific)

(XML) Data Model	Element
Namespace (prefix)	nar
Name	remoteContent
Title	Remote Content
Definition	A rendition of the content using a reference/link to a resource representing the content data at a remote location.
User Note(s)	To identify the remote resource either the residref attribute or the href attribute MUST be set, optionally both MAY be used in parallel. The residref attribute identifies a managed remote resource by its globally unique identifier (if the resource has such an identifier), while the href attribute identifies the location of the remote resource in e.g. a (remote) file system. If the remote resource is managed - like an item - and consequently the residref attribute is used, a version attribute MAY indicate the resource's version; in the absence of version information, the remote resource is the latest version available. The Width Unit and Height Unit may take the following values, taken from an IPTC defined controlled vocabulary: lines, pixels, points (more units are defined by this CV, check the most recent version).
Implementation Note(s)	If the Width Unit and/or Height Unit IS NOT present, the default value(s) in **Table 160** on page 184 MUST be assumed
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	Mandatory IPTC NewsCodes: http://cv.iptc.org/newscodes/dimensionunit/

Table 111. Remote Content (NewsML-G2 Specific) (Continued)

		Name	Datatype
Attribute(s)	▪ **newsContentAt-tributes** (page 181)	id (0..1)	XML Schema ID
		rendition (0..1)	QCodeType
	▪ **targetResourceAt-tributes** (page 182)	**Name**	**Datatype**
		href (0..1)	IRIType
		residref (0..1)	XML Schema string
		version (0..1)	XML Schema positiveInteger
		contenttype (0..1)	XML Schema string
		format (0..1)	QCodeType
		size (0..1)	XML Schema nonNegativeInteger
	▪ **newsContentCharac-teristics** (page 182)	**Name**	**Datatype**
		Word Count	XML Schema nonNegativeInteger
		Image Width	XML Schema nonNegativeInteger
		Image Width Unit	QCodeType
		Image Height	XML Schema nonNegativeInteger
		Image Height Unit	QCodeType
		Image Orientation	XML Schema nonNegativeInteger
		Image Colour Space	QCodeType
		Resolution	XML Schema positiveInteger
		Duration	XML Schema nonNegativeInteger
		Unit of Duration	QCodeType
		Audio Codec	QCodeType
		Audio Bit Rate	XML Schema positiveInteger
		Audio Variable Bit Rate flag	XML Schema boolean
		Audio Sample Size	XML Schema positiveInteger
		Audio Sample Rate	XML Schema positiveInteger
		Audio Channels	QCodeType
		Video Codec	QCodeType
		Video Average Bit Rate	XML Schema positiveInteger
		Video Variable Bit Rate flag	XML Schema boolean
		Video Frame Rate	XML Schema positiveInteger
		Video Scan Technique	enumeration progressive/ interlaced
		Video Aspect Ratio	XML Schema nomalizedString
		Video Sampling Method	XML Schema nomalizedString
	▪ language (0..1); XML Schema language; The language used by the remote content.		
Child Element(s)	▪ Extension Point (0..unbounded). Any set of provider-defined properties.		
XML Schema Note(s)			
Example(s)			

10.6.104 Remote Information about a Concept

Table 112. Remote Information about a Concept

(XML) Data Model	Element
Namespace (prefix)	nar
Name	remoteInfo
Title	Remote Information about a Concept
Definition	Link to an item or a web resource which provides information about the concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LinkType** (page 173)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.105 Rights Information

Table 113. Rights Information

(XML) Data Model	Element
Namespace (prefix)	nar
Name	rightsInfo
Title	Rights Information
Definition	A set of properties representing the rights associated with the Item.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **accountable** (page 37) (0..1)
	▪ **copyrightHolder** (page 60) (0..1)
	▪ **copyrightNotice** (page 61) (0..unbounded)
	▪ **usageTerms** (page 153) (0..unbounded)
	▪ Extension Point (0..unbounded). Any set of provider-defined properties.
XML Schema Note(s)	
Example(s)	

10.6.106 Role in the Workflow

Table 114. Role in the Workflow

(XML) Data Model	Element
Namespace (prefix)	nar
Name	role
Title	Role in the Workflow
Definition	The role of the Item in the editorial workflow.
User Note(s)	Among other possibilities this property may indicate the importance of the item in a fee by concepts like "flash", "bulletin", "alert", "urgent", "newsbreak", and so on.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**QualPropType** (page 176)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.107 Same As

Table 115. Same As

(XML) Data Model	Element
Namespace (prefix)	nar
Name	sameAs
Title	Same As
Definition	An identifier of an equivalent concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.108 Scheme Declaration

Table 116. Scheme Declaration

(XML) Data Model	Element
Namespace (prefix)	nar
Name	scheme
Title	Scheme Declaration
Definition	A scheme alias-to-URI mapping.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ alias (1); XML Schema NCName; A short string assigned by the provider as a representation of the scheme URI. ▪ uri (1); **IRIType** (page 171); The URI which identifies the scheme.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.109 Sender

Table 117. Sender

(XML) Data Model	Element
Namespace (prefix)	nar
Name	sender
Title	Sender
Definition	The sender of the items, which may be an organisation or a person.
User Note(s)	The structure of this string is not specified by the IPTC. Best practice is to identify a sender by its domain name.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema string
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.110 Slugline

Table 118. Slugline

(XML) Data Model	Element
Namespace (prefix)	nar
Name	slugline
Title	Slugline
Definition	A sequence of tokens associated with the content. The interpretation is provider specific.
User Note(s)	*separator* providers may choose to use more complex separation rules. In such a case the meaning of the separators must be conveyed by some other means.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**IntlStringType** (page 170)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ separator (0..1); XML Schema string; The character string acting as a separator between the tokens in the slugline. ▪ role (0..1); **QCodeType** (page 175); The role this slugline plays in the scope of the full content.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.111 Subject

Table 119. Subject

(XML) Data Model	Element
Namespace (prefix)	nar
Name	subject
Title	Subject
Definition	An important topic of the content; what the content is about. For a Knowledge Item the content is the set of concepts, for an event the content is the event as such.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**FlexPropType** (page 167)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.112 Timestamp

Table 120. Timestamp

(XML) Data Model	Element
Namespace (prefix)	nar
Name	timestamp
Title	Timestamp
Definition	A date-and-time associated with the message, other than the date-and-time the message was sent.
User Note(s)	The exact meaning may be refined by the role qualifier.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**DateTimePropType** (page 165)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ role (0..1); **QCodeType** (page 175); A refinement of the semantics of the property.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.113 Transmission Identifier

Table 121. Transmission Identifier

(XML) Data Model	Element
Namespace (prefix)	nar
Name	transmitId
Title	Transmission Identifier
Definition	The transmission identifier associated with the message.
User Note(s)	This string's structure is not specified by the IPTC. No two News Messages sent by the same sender on the same date may have the same identifier. In case of retransmission it is not required to update this identifier.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema string
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.114 Type of a Concept

Table 122. Type of a Concept

(XML) Data Model	Element
Namespace (prefix)	nar
Name	type
Title	Type of a Concept
Definition	The nature of the concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**QualPropType** (page 176)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.115 Urgency

Table 123. Urgency

(XML) Data Model	Element
Namespace (prefix)	nar
Name	urgency
Title	Urgency
Definition	The editorial urgency of the content. A value of 1 corresponds to the highest urgency, a value of 9 to the lowest.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**Int1To9Type** (page 169)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.116 Usage Terms

Table 124. Usage Terms

(XML) Data Model	Element
Namespace (prefix)	nar
Name	usageTerms
Title	Usage Terms
Definition	A natural-language statement about the usage terms pertaining to the content.
User Note(s)	This property includes the type of usage to which the rights apply, the geographical area or areas to which specified usage rights pertain, the indication of the rights holder, restrictions on the use of the content and the time period over which the stated rights apply. If no usage terms are specified, then no specific restrictions on use of the content beyond contractual ones are being asserted.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**LabelType** (page 172)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.6.117 Web Address

Table 125. Web Address

(XML) Data Model	Element
Namespace (prefix)	nar
Name	web
Title	Web Address
Definition	A Web address.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	**IRIType** (page 171)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ role (0..1); **QCodeType** (page 175); A refinement of the semantics of the web address.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.7 Element Group Definitions

10.7.1 Concept Relationships Group

This group of properties defines the relationship between a concept and other concepts. The elements may be inserted in any order.

Table 126. Concept Relationships Group Elements

Element Title	Element Name	Card	Described on Page
Same As	**sameAs**	(0..unbounded)	144
Broader	**broader**	(0..unbounded)	41
Narrower	**narrower**	(0..unbounded)	118
Related	**related**	(0..unbounded)	137

10.7.2 Entity Details Group

This group of aggregate components defines detailed properties for a specific type of concept. Only one element from this group MAY be present in the wrapping context.

Table 127. Entity Details Group Elements

Element Title	Element Name	Card	Described on Page
Person Details	**personDetails**	(1)	127
Organisation Details	**organisationDetails**	(1)	125
Geopolitical Area Details	**geoAreaDetails**	(1)	90
POI Details	**POIDetails**	(1)	129
Object Details	**objectDetails**	(1)	122

10.7.3 Administrative Metadata Group

This group of properties is related to the administrative facet of content. The order of the elements in this group is flexible: The non-repeatable elements MUST come first, then the repeatable elements may be inserted in any order.

Table 128. Administrative Metadata Group Elements

Element Title	Element Name	Card	Described on Page
Urgency	**urgency**	(0..1)	152
Date Content Created	**contentCreated**	(0..1)	66
Date Content Modified	**contentModified**	(0..1)	67
Located	**located**	(0..unbounded)	101
Information Source	**infoSource**	(0..unbounded)	152
Creator	**creator**	(0..unbounded)	64
Contributor	**contributor**	(0..unbounded)	59
Audience	**audience**	(0..unbounded)	40

10.7.4 Knowledge Descriptive Metadata Group

This group of properties is related to the descriptive facet of knowledge content. The order of the elements in this group is flexible: all elements are repeatable and may be inserted in any order.

Table 129. Knowledge Descriptive Metadata Group Elements

Element Title	Element Name	Card	Described on Page
Language	**language**	(0..unbounded)	109
Keyword	**keyword**	(0..unbounded)	107
Subject	**subject**	(0..unbounded)	148
Description	**description**	(0..unbounded)	78

10.7.5 Descriptive Metadata Group

This group of properties is related to the descriptive facet of news content. The order of the elements in this group is flexible: all elements are repeatable and may be inserted in any order.

Table 130. Descriptive Metadata Group Elements

Element Title	Element Name	Card	Described on Page
Language	**language**	(0..unbounded)	109
Genre	**genre**	(0..unbounded)	88
Keyword	**keyword**	(0..unbounded)	107
Subject	**subject**	(0..unbounded)	148
Slugline	**slugline**	(0..unbounded)	147
Headline	**headline**	(0..unbounded)	94
Dateline	**dateline**	(0..unbounded)	76
By	**by**	(0..unbounded)	42
CreditLine	**creditline**	(0..unbounded)	65
Description	**description**	(0..unbounded)	78

10.7.6 Item Management Group

This group of properties is related to the management of Items. They MUST appear in the order of the table below.

Table 131. Item Management Group Elements

Element Title	Element Name	Card	Described on Page
Item Class	**itemClass**	(1)	102
Content Provider	**provider**	(1)	57
Date Item Version Created	**versionCreated**	(1)	70
Date Item First Created	**firstCreated**	(0..1)	69
Date Item Embargo Ends	**embargoed**	(0..1)	68
Publish Status	**pubStatus**	(0..1)	134
Role in the Workflow	**role**	(0..1)	143
File Name	**filename**	(0..1)	87
Editorial Service	**service**	(0..unbounded)	81
Item Title	**title**	(0..unbounded)	106
Editorial Note	**edNote**	(0..unbounded)	80

10.8 Datatype Definitions

10.8.1 Any Item Type

Table 132. Any Item Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	AnyItemType
Title	Any Item Type
Definition	An abstract class. All G2 items are inherited from this class.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	• standard; (0..1); string value: default = "XML Schema string"; The IPTC standard to which the Item is conformant. • standardversion; (1); XML Schema string; restricted to the format "integer.integer"; The major-minor version of the XML schema specifying the Item. • conformance; (0..1); string value: default = "core"; The conformance level to which the Item is conformant. • guid; (1); XML Schema string; The persistent, universally unique identifier for the Item. • version; (0..1); XML Schema positiveInteger; The version of the Item. **i18nAttributes** (page 181): xml:lang (0..1) — XML Schema language; dir (0..1) — XML Schema string: enumeration *ltr*, *rtl*.
Child Element(s)	• W3C XML Digital Signature (from namespace http://www.w3.org/2000/09/xmldsig#) (0..1) • **catalogRef** (page 138) (0..unbounded) • **catalog** (page 44) (0..unbounded) • **rightsInfo** (page 142) (0..1) • **itemMeta** (page 103) (1)
XML Schema Note(s)	At least one of the elements catalogRef or catalog element MUST be present. These elements MAY be inserted in any order.
Example(s)	

10.8.2 Approximate Date and Time Property Type

Table 133. Approximate Date and Time Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	ApproximateDateTimePropType
Title	Approximate Date and Time Property Type
Definition	A calendar date with an optional time (with time zone) part and an optional approximation range for the date.
User Note(s)	If a start and/or end attribute exists, then the date is approximate, else it is defined precisely by the property's date. If only the approximation start date is provided the range ends with the property value; if only the approximation end date is provided the approximation range starts with the property value.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	Union of a XML Schema dateTime, date, gYearMonth, gYear, gMonth, gMonthDay, and gDay, with the addition of the following qualifiers.
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	• approxstart (0..1); **TruncatedDateTimeType** (page 179); The date (and optionally time) at which the approximation range begins. • approxend (0..1); **TruncatedDateTimeType** (page 179); The date (and optionally time) at which the approximation range ends.
Child Element(s)	
XML Schema Note(s)	
Example(s)	Examples of the format {reference date, range start date, range end date}: {2006-09-20, 2006-09-18, 2006-09-30} = on about 20 September 2006, not before the 18th, not after the 30th. {1855, 1850, 1860} = in about 1855, not before the 1850, not after the 1860. {--05-03, 1950, 1953} = on a 3 May, between 1950 and 1953.

10.8.3 Block Type

Table 134. Block Type

(XML) Data Model	Type		
Namespace (prefix)	nar		
Name	BlockType		
Title	Block Type		
Definition	Information about the content as natural language string with minimal markup and line breaks.		
User Note(s)	Blocks are primarily used for notes, comments or instructions created by a news provider for use by recipient editorial teams.		
Implementation Note(s)			
XML Schema Spec	At: CCL		
Datatype	XML mixed content		
Internally Ctrl Values			
Externally Ctrl Values			
Attribute(s)	▪ role (0..1); **QCodeType** (page 175); A refinement of the semantics of the block.		
	▪ **i18nAttributes** (page 181)	**Name**	**Datatype**
		xml:lang (0..1)	XML Schema language
		dir (0..1)	XML Schema string: enumeration *ltr*, *rtl*.
Child Element(s)	▪ **br** (page 110) (0..unbounded)		
	▪ Extension Point (0..unbounded). Any set of provider-defined properties.		
XML Schema Note(s)			
Example(s)			

10.8.4 Concept Identifier Type

Table 135. Concept Identifier Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	ConceptIdType
Title	Concept Identifier Type
Definition	The preferred unambiguous identifier for the concept.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ qcode (1); **QCodeType** (page 175); A qualified code which identifies a concept. ▪ created (0..1); **DateOptTimeType** (page 163); The date (and optionally the time) when the identifier was created. ▪ retired (0..1); **DateOptTimeType** (page 163); The date (and optionally the time) after which the concept identifier should no longer be applied as the value of a property.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.5 Content Metadata Type

Table 136. Content Metadata Type

(XML) Data Model	Type		
Namespace (prefix)	nar		
Name	ContentMetadataType		
Title	Content Metadata Type		
Definition			
User Note(s)			
Implementation Note(s)			
XML Schema Spec	At: CCL		
Datatype			
Internally Ctrl Values			
Externally Ctrl Values			
Attribute(s)			
Child Element(s)	▪ **Administrative Metadata Group** (page 155) (0..1)	**Element Name**	**Page**
		urgency (0..1)	152
		contentCreated (0..1)	66
		contentModified (0..1)	67
		located (0..unbounded)	114
		infoSource (0..unbounded)	101
		creator (0..unbounded)	64
		contributor (0..unbounded)	59
		audience (0..unbounded)	40
	▪ Extension Point (0..unbounded). Any set of provider-defined properties.		
XML Schema Note(s)			
Example(s)			

10.8.6 Date and Optional Time Property Type

Table 137. Date and Optional Time Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	DateOptTimePropType
Title	Date and Optional Time Property Type
Definition	A date plus optionally a time and a time zone.
User Note(s)	The time may be expressed in Universal Time Coordinates (UTC), or in local time together with a time zone offset in hours and minutes.
Implementation Note(s)	DateOptTimePropType is used as a property datatype.
XML Schema Spec	At: CCL
Datatype	The union of a XML schema dateTime and date.
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.7 Date and Optional Time Type

Table 138. Date and Optional Time Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	DateOptTimeType
Title	Date and Optional Time Type
Definition	A date plus optionally a time and a time zone.
User Note(s)	The time may be expressed in Universal Time Coordinates (UTC), or in local time together with a time zone offset in hours and minutes.
Implementation Note(s)	DateOptTimeType is used as a datatype for attributes only.
XML Schema Spec	At: Both CCL and PCL
Datatype	The union of a XML schema dateTime (year, month, day, hour, minute, second, optional decimal fraction of a second) and date (year, month and day plus an optional time zone indicator).
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.8 Date and Time or Null Value Property Type

Table 139. Date and Time or Null Value Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	DateTimeOrNullPropType
Title	Date and Time or Null Value Property Type
Definition	The type of a property with date and time - or Nothing
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	A union of the XML Schema dateTime type and an XML Schema string restricted to an empty value (UnionDateEmptyStringType).
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.9 Date and Time Property Type

Table 140. Date and Time Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	DateTimePropType
Title	Date and Time Property Type
Definition	A date plus a mandatory time and an optional time zone.
User Note(s)	
Implementation Note(s)	DateTimePropType is used as a property datatype.
XML Schema Spec	At: CCL
Datatype	XML Schema dateTime
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.10 Electronic Address Type

Table 141. Electronic Address Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	ElectronicAddressType
Title	Electronic Address Type
Definition	
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	XML Schema string
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ role (0..1); **QCodeType** (page 175); A refinement of the semantics of the electronic address.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.11 Flexible Property Type

Table 142. Flexible Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	FlexPropType
Title	Flexible Property Type
Definition	Flexible generic data type for both controlled and uncontrolled values.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ qcode (0..1); **QCodeType** (page 175); A qualified code assigned as a property value. Or ▪ literal (0..1); XML Schema normalizedString; A free-text value assigned as a property value. ▪ type (0..1); **QCodeType** (page 175); The type of the concept assigned as a controlled or uncontrolled property value.
Child Element(s)	▪ **name** (page 133) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.8.12 Integer 0 to 100 Type

Table 143. Integer 0 to 100 Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	Int100Type
Title	Integer 0 to 100 Type
Definition	An integer with a value range from 0 to 100.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema integer, value restriction 0 to 100.
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.13 Integer 1 to 9 Type

Table 144. Integer 1 to 9 Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	Int1To9Type
Title	Integer 1 to 9 Type
Definition	An integer with a value range from 1 to 9.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema integer, value restriction 1 to 9.
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.14 International String Type

Table 145. International String Type

(XML) Data Model	Type		
Namespace (prefix)	nar		
Name	IntlStringType		
Title	International String Type		
Definition	An internationalized string, where the language and directionality in which the information is written are indicated.		
User Note(s)			
Implementation Note(s)			
XML Schema Spec	At: CCL		
Datatype	Extends XML Schema normalizedString		
Internally Ctrl Values			
Externally Ctrl Values			
Attribute(s)	▪ **i18nAttributes** (page 181)	**Name**	**Datatype**
		xml:lang (0..1)	XML Schema language
		dir (0..1)	XML Schema string: enumeration *ltr*, *rtl*.
Child Element(s)			
XML Schema Note(s)			
Example(s)			

10.8.15 IRI Type

Table 146. IRI Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	IRIType
Title	IRI Type
Definition	An Internationalized Resource Identifier reference, as defined by RFC3987.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	XML Schema anyURI
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.16 Label Type

Table 147. Label Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	LabelType
Title	Label Type
Definition	An internationalized string with a role qualifier. Information about the content as natural language string with minimal markup.
User Note(s)	Labels are assertions expressed as natural language strings intended to be consumed by human beings. They are typically displayed alongside the content of an Item or in place of Items in a list, providing a means of selection among them.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	Extends **IntlStringType** (page 170)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ role (0..1); **QCodeType** (page 175); A refinement of the semantics of the label.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.17 Link Type

Table 148. Link Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	LinkType
Title	Link Type
Definition	A datatype for linking this item to other items or resources.
User Note(s)	To identify the target resource either the residref attribute or the href attribute MUST be set, optionally both MAY be used in parallel. The residref attribute identifies the target resource by its globally unique identifier (if the resource has such an identifier), while the href attribute identifies the location of the target resource in e.g. a (remote) file system. If the target resource is an Item and the residref attribute is used, a version attribute MAY indicate the target Item version; in the absence of version information, the target resource is the latest version available.
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	

Attribute(s)	▪ rel (0..1); **QCodeType** (page 175); The identifier of the relationship between the current Item and the target resource.		

		Name	**Datatype**
	i18nAttributes (page 181)	href (0..1)	IRIType
		residref (0..1)	XML Schema string
		version (0..1)	XML Schema positiveInteger
		contenttype (0..1)	XML Schema string
		format (0..1)	QCodeType
		size (0..1)	XML Schema non NegativeInteger

Attribute(s)	▪ guidref (0..1); XML Schema string; The use of this attribute is DEPRECATED, use *residref* instead.
	▪ hreftype (0..1); XML Schema normalizedString; The use of this attribute is DEPRECATED, use *contenttype* instead.
Child Element(s)	▪ **title** (page 112) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.8.18 QCode Property Type

Table 149. QCode Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	QCodePropType
Title	QCode Property Type
Definition	An element with a QCode value in a qcode attribute.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ qcode (1); **QCodeType** (page 175); A qualified code assigned as a property value.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.19 QCode Type

Table 150. QCode Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	QCodeType
Title	QCode Type
Definition	A QCode value.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	A set of characters (no whitespace, no colon) followed by a colon (:) character, followed by a set of characters with no whitespace. The corresponding regular expression is: [^\s:]+:[^\s]+
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.20 Qualified Property Type

Table 151. Qualified Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	QualPropType
Title	Qualified Property Type
Definition	An element with a QCode value and optional names.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: CCL
Datatype	Extends **QCodePropType** (page 174)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	▪ **name** (page 50) (0..unbounded)
XML Schema Note(s)	
Example(s)	

10.8.21 Recurrence Rule Type

Table 152. Recurrence Rule Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	RecurrenceRuleType
Title	Recurrence Rule Type
Definition	A rule of recurrence applied to a date associated with an event.
User Note(s)	The different datatypes listed in the Attribute(s) row below correspond to iCalendar datatypes and enumerations.
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	• freq (1); XML Schema string; The type of recurrence rule.
	• interval (0..1); XML Schema positiveInteger; How often the recurrence rule repeats.
	• until (0..1); **DateOptTimeType** (page 163); A date-time value which bounds the recurrence rule in an inclusive manner.
	• count (0..1); XML Schema positiveInteger; The number of occurrences at which to range-bound the recurrence.
	• bysecond (0..1); tokens of XML Schema nonNegativeInteger 0..59 ; The BYSECOND rule part specifies a space separated list of seconds within a minute.
	• byminute (0..1); tokens of XML Schema nonNegativeInteger 0..59; The BYMINUTE rule part specifies a space separated list of minutes within an hour.
	• byhour (0..1); tokens of XML Schema nonNegativeInteger 0..23; The BYHOUR rule part specifies space separated list of hours of the day.
	• byday (0..1); tokens of XML Schema string, regEx pattern = "(\-|\+)?([0-9]){0,2}(MO|TU|WE|TH|FR|SA|SU)": ; The BYDAY rule part specifies a space separated list of days of the week.
	• bymonthday (0..1); tokens of XML Schema Integer -31..-1 and 1..31; The BYMONTHDAY rule part specifies a space separated list of days of the month.
	• bymonth (0..1); tokens of XML Schema nonNegativeInteger 1..12; The BYMONTH rule part specifies a space separated list of months of the year.
	• byyearday (0..1); tokens of XML Schema Integer -366..-1 and 1..366; The BYYEARDAY rule part specifies a space separated list of days of the year.
	• byweekno (0..1); tokens of XML Schema Integer -53..-1 and 1..53; The BYWEEKNO rule part specifies a space separated list of ordinals specifying weeks of the year.
	• bysetpos (0..1); tokens of XML Schema Integer -366..-1 and 1..366; The BYSETPOS rule part specifies a space separated list of values which corresponds to the nth occurrence within the set of events specified by the rule.
	• wkst (0..1); XML schema string, enumeration; The day on which the workweek starts.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.22 Truncated Date and Time Property Type

Table 153. Truncated Date and Time Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	TruncatedDateTimePropType
Title	Truncated Date and Time Property Type
Definition	An element with a calendar date as a value. The date has an optional time part: it is optionally possible to omit one to many less significant components, from right to left. "From right to left" means starting from the least significant component (i.e. fraction of a second) and to continue with the full time part, the day part and the month part. The year part must not be omitted.
User Note(s)	
Implementation Note(s)	TruncatedDateTimePropType is used as a property datatype.
XML Schema Spec	At: CCL
Datatype	The union of a XML Schema dateTime, date, gYearMonth and gYear, and additionally supports provider-defined qualifiers.
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.23 Truncated Date and Time Type

Table 154. Truncated Date and Time Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	TruncatedDateTimeType
Title	Truncated Date and Time Type
Definition	A calendar date with an optional time part: it is optionally possible to omit one to many less significant components, from right to left. "From right to left" means starting from the least significant component (i.e. fraction of a second) and to continue with the full time part, the day part and the month part. The year part must not be omitted.
User Note(s)	
Implementation Note(s)	TruncatedDateTimeType is used as a qualifier datatype.
XML Schema Spec	At: Both CCL and PCL
Datatype	The union of a XML Schema dateTime, date, gYearMonth and gYear.
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.8.24 Typed Qualified Property Type

Table 155. Typed Qualified Property Type

(XML) Data Model	Type
Namespace (prefix)	nar
Name	TypedQualPropType
Title	Typed Qualified Property Type
Definition	An element with a QCode value and an additional type for this value.
User Note(s)	
Implementation Note(s)	
XML Schema Spec	At: Both CCL and PCL
Datatype	**QualPropType** (page 176)
Internally Ctrl Values	
Externally Ctrl Values	
Attribute(s)	▪ type (0..1); **QCodeType** (page 175); The type of the concept assigned as property value.
Child Element(s)	
XML Schema Note(s)	
Example(s)	

10.9 Attribute Group Definitions

10.9.1 Internationalization Attributes Group

Table 156. i18nAttributes

Title	Name	Card	Datatype	Definition
Language Indicator	xml:lang	0..1	XML Schema language	The language of textual content.
Direction	dir	0..1	XML Schema string: enumeration *ltr*, *rtl*.	The directionality of textual content.

Notes:

♦ *xml:lang* values MUST follow RFC 4646 and RFC 4647 (as both replace RFC 3066) or its successor. See also IETF BCP47.

♦ The *dir* qualifier specifies the directionality of scripted text: left-to-right ("ltr", the default) or right-to-left ("rtl"). Its definition follows the XHTML 1.0 production. Directionality – left-to-right or right-to-left – is assigned to characters in Unicode, in order to allow the text to be rendered properly. For example, while English characters are presented left-to-right, Hebrew characters are presented right-to-left. Unicode defines a bidirectional algorithm that must be applied whenever a document contains right-to-left characters. While this algorithm usually gives the proper presentation, some situations leave directionally neutral text and require the dir attribute to specify the base directionality.

10.9.2 News Content Attributes

Table 157. newsContentAttributes

Title	Name	Card	Datatype	Definition
Local Identifier	id	0..1	XML Schema ID	The local identifier of the element.
Rendition	rendition	0..1	QCodeType	The specific rendition of content this component represents. A specific value for rendition MUST NOT be used more than once for elements under contentSet of a NewsItem.

Notes:

♦ *rendition* helps the processor choosing between alternative content components. Thus a picture may have pieces of content rendered as "thumbnail" or "preview", a text Item may contain an "sms", a "web" and a "print" rendition; values may be extended by individual providers.

♦ Note that *contentype* and *itemClass* of **Item Metadata** (page 103) are complementary. *itemClass* indicates the nature of the Item's content, but not the format of the components it contains: an Item can be of class "video" with a gif thumbnail and a mpeg2 main rendition.

♦ format is used if no precise content type exists (e.g. "application/xml" or "text/plain" are the only mime types available for a given format). In such a case the Content Type information is complement with Format information. For example the NSK variant of the TIFF format can be expressed as: Content Type = "image/tiff" plus Format = "fmt:NSk".

10.9.3 Target Resource Attributes Group

Table 158. targetResourceAttributes

Title	Name	Card	DataType	Definition
Hyperlink	href	0..1	IRIType	The locator of the target resource
Resource Identi-fier Reference	residref	0..1	XML Schema string	The provider's identifier of the target resource
Item Version	version	0..1	XML Schema positiveInteger	The version of the target resource
Content Type	contenttype	0..1	XML Schema string	The IANA (Internet Assigned Numbers Authority) MIME type of the target resource
Format	format	0..1	QCodeType	A refinement of a generic content type (i.e. IANA MIME type)
Size	size	0..1	XML Schema non NegativeInteger	The size in bytes of the target resource

10.9.4 News Content Characteristics

To be implemented as an attribute group.

Table 159. newsContentCharacteristics

Title	Name	Card	Datatype	Definition
Word Count	wordcount	0..1	XML Schema nonNegativeInteger	The count of words of textual content. Applies to textual content.
Image Width	width	0..1	XML Schema nonNegativeInteger	The Image Width for visual content.
Image Width Unit	widthunit	0..1	QCodeType	If present it defines the Width Unit for the Image Width.
Image Height	height	0..1	XML Schema nonNegativeInteger	The Image Height for visual content.
Image Height Unit	heightunit	0..1	QCodeType	If present it defines the Height Unit for the Image Height.
Image Orientation	orientation	0..1	XML Schema nonNegativeInteger	The orientation of the visual content of an image in regard to the standard rendition of the digital image data. Values in the range of 1 to 8 are compatible with the TIFF 6.0 and Exif 2.3 specifications. Applies to image content. Details about the values can be found in **Table 161**.
Image Colour Space	colourspace	0..1	QCodeType	The colour space of an image. Applies to image content.
Resolution	resolution	0..1	XML Schema positiveInteger	The recommended printing resolution for an image in dots per inch. Applies to image content.
Duration	duration	0..1	XML Schema nonNegativeInteger	The clip duration in time units defined by durationUnit. The default time unit is seconds. Applies to audio-visual content.

Table 159. newsContentCharacteristics (Continued)

Title	Name	Card	Datatype	Definition
Unit of Duration	durationunit	0..1	QCodeType	If present it defines the time unit for the duration attribute. Only codes for integer value time units of the recommended CV (available at http://cv.iptc.org/newscodes/ timeunit/) must be applied.
Audio Codec	audiocodec	0..1	QCodeType	The applicable codec for audio data. Applies to audio content.
Audio Bit Rate	audiobitrate	0..1	XML Schema positiveInteger	The audio bit rate in bps. Indicates the average variable bit rate if audiovbr is set to true.
Audio Variable Bit Rate flag	audiovbr	0..1	XML Schema boolean	An indication that the audio data is encoded with a variable bit rate. Applies to audio content.
Audio Sample Size	audiosamplesize	0..1	XML Schema positiveInteger	The number of bits per audio sample, e.g. 16. Applies to audio content. Aliases: audio bits per sample, audio resolution, audio encoding depth.
Audio Sample Rate	audiosamplerate	0..1	XML Schema positiveInteger	The number of audio samples per second, expressed as a sampling frequency in Hz, e.g. 44100. Applies to audio content.
Audio Channels	audiochannels	0..1	QCodeType	The audio sound system, e.g. *mono*, *stereo*, *surround*. Codes may represent e.g. *mono*, *stereo*, *surround*. Applies to audio content.
Video Codec	videocodec	0..1	QCodeType	The applicable codec for video data. Applies to video content.
Video Average Bit Rate	videoavgbitrate	0..1	XML Schema positiveInteger	The video bit rate in bps. Indicates the average variable bit rate if videovbr is set to true.
Video Variable Bit Rate flag	videovbr	0..1	XML Schema boolean	An indication that video data is encoded with a variable bit rate. Applies to video content.
Video Frame Rate	videoframerate	0..1	XML Schema positiveInteger	The number of video frames per second, i.e. the rate at which the material should be shown in order to achieve the intended visual effect. This is the rate at which the material should be shown in order to achieve the intended visual effect. Applies to video content.
Video Scan Technique	videoscan	0..1	enumeration progressive/ interlaced	The video scan technique, progressive or interlaced. Applies to video content.
Video Aspect Ratio	videoaspectratio	0..1	XML Schema nomalizedString	The video aspect ratio, e.g. 4:3 or 16:9. Applies to video content.
Video Sampling Method	videosampling	0..1	XML Schema nomalizedString	The video sampling method, e.g. 4:1:1. Applies to video content.

Table 160 defines the default units to be used for the Image Width and/or Image Height, if the corresponding Image Width Unit and/or Image Height Unit are not specified.

Table 160. Default Image Height/Width Unit Values

Content Type	Height Unit (default)	Width Unit (default)
Picture	Pixels	Pixels
Graphic: Still / Animated	Points	Points
Video (Analog)	Lines	Pixels
Video (Digital)	Pixels	Pixels

Table 161 enumerates the allowed values for the **orientation** attribute. The values are integers from 1 to 8 and reflect the TIFF 6.0 and Exif 2.3 specification.

Remark on the Definition column: by the Exif specification the "0th row" is the first row which has been scanned for the digital image and the "0th column" the first column. The explanation describes how a picture having the orientation of value 1 has to be flipped and/or rotated to align with one of the values 2 through 8.

The column "Visual example" shows a picture of the character F having an orientation aligning with the value. For the viewer's convenience the visual top, bottom, left and right of an image are marked up with the initial character of the corresponding term.

Table 161. Orientation Values

Value	Definition and Explanation	Visual Example
1	The 0th row is at the visual top of the image, and the 0th column is the visual left-hand side. Explanation: upright, no flip, no rotation.	
2	The 0th row is at the visual top of the image, and the 0th column is the visual right-hand side. Explanation: upright, image flipped about the vertical axis.	
3	The 0th row is at the visual bottom of the image, and the 0th column is the visual right-hand side. Explanation: image rotated 180 degrees.	
4	The 0th row is at the visual bottom of the image, and the 0th column is the visual left-hand side. Explanation: image flipped about the vertical axis and rotated 180 degrees.	
5	The 0th row is the visual left-hand side of the image, and the 0th column is the visual top. Explanation: image flipped about the vertical axis and rotated 90 degrees counterclockwise.	

Table 161. Orientation Values (Continued)

Value	Definition and Explanation	Visual Example
6	The 0th row is the visual right-hand side of the image, and the 0th column is the visual top. Explanation: image rotated 90 degrees counterclockwise.	
7	The 0th row is the visual right-hand side of the image, and the 0th column is the visual bottom. Explanation: image flipped about the vertical axis and rotated 90 degrees clockwise.	
8	The 0th row is the visual left-hand side of the image, and the 0th column is the visual bottom. Explanation: image rotated 90 degrees clockwise.	

11 Glossary

Table 162. Glossary

Term	Definition
alias	See **scheme alias**.
anonymous controlled vocabulary	A **controlled vocabulary** that is not a **scheme**.
catalog	A file containing information about **scheme**(s).
code	A character sequence which forms a member of a **controlled vocabulary**.
concept	Anything that one may wish to refer to, e.g. Diplomacy, Paris, the Euro, OECD, the Japanese language, the IMF, Oil, Madonna, Olympic Games. Thus concept here has a broader meaning than is usual. This is because we are dealing with the idea of Paris, rather than with Paris itself, the idea of Oil, rather than Oil itself, and so on. Concepts fall in two broad categories: **named entity** and generic (or abstract) concepts. A concept may be defined by a **ConceptItem**.
ConceptItem	A specialised data structure containing data representing a **concept**. An identifier for the concept is mandatory and it may, optionally, provide information such as name, definition, relationships, etc. A **concept** defined by a ConceptItem is identified by a {**scheme alias**, **code**} pair. The reverse relationship does not necessarily hold. In other words, there is no requirement that each {scheme alias, code} pair has a corresponding ConceptItem. See also: **representation of a ConceptItem**.
concept type	A concept type allows the logical grouping of all similar **concept**(s), regardless of the **scheme**(s) the concepts belong to. Examples of concept type might be: Person, Organisation, Language, Business Sector, News Subject or Geography. A concept type is itself a concept and, as such, is represented by a code in a scheme.
concept URI	A URI which identifies a **concept**. A concept URI is obtained by appending the code representing this concept to the **scheme URI** corresponding to the scheme to which the code belongs. An abbreviated notation of a concept URI is a **Qualified code, QCode**.
conformance level	A layer of functionality defined by a standard. The **News Architecture** power conformance level is a superset of the **News Architecture** core conformance level, both in terms of structure and processing.
controlled vocabulary	A set of **code**(s), managed by some authority (e.g. a person or an organisation), employing some mechanism (e.g. an XML Schema, a Web page, an RFC, or **KnowledgeItem**) to maintain this set. A controlled vocabulary is either a **scheme** or is anonymous (i.e. an **anonymous controlled vocabulary**). Each code in a controlled vocabulary represents a **concept**.
constrained metadata container	A **metadata container** which either accepts only **code**(s) of a specified **concept type** or accepts only codes from a specified **controlled vocabulary** (which may be an **anonymous controlled vocabulary** or a **scheme**).
Definition	A human-readable string, held within a **ConceptItem**, which defines the **concept** which the item represents. Definitions will be implemented using **free-form text**.
formal metadata element	A metadata element designed to hold data that is not **free-form text**, e.g. **code**(s), or **formal text**. Such data is usually consumed by software. An example of such an element with a code value is subject. An example value of *subject* is "nc:15062000".
free-form metadata element	A metadata element designed to hold **free-form text**. Such data is usually consumed by humans. An example of a free-form metadata element is title. An example value of title is "Ian Thorpe makes a splash". The **News Architecture** provides a couple of datatypes for free-form text, e.g. International String, Label or BlockText.

Table 162. Glossary (Continued)

Term	Definition
free-form text	Arbitrary text, i.e. text which does not consist of **code**(s) drawn from a **controlled vocabulary**. A headline or a description is an example of free-form text.
formal text	A set of one or more **metadata container**(s) for **free-form text** to express formal information about a specific **concept**, but without identifying it. Basic properties for formal text are literal, name, definition and note. An example for formal text is the Creator property with a value of name = "Alfred Hitchcock", definition = "Suspense movie director and producer, born 1899, died 1980".
globally unique identifier	An identifier that is unique, unambiguous, and persistent. Being unique and unambiguous means that there is a 1:1 relationship between the identifier and the identified object. Being persistent means that the identifier never changes as time passes, and that it is never reused as an identifier for another object even if the original object disappears. See also **persistent identifier**, **unambiguous identifier**, and **unique identifier**.
Identifier	A string used to identify a specific **resource**. See **persistent identifier**, **unambiguous identifier**, **unique identifier**, and **globally unique identifier** (GUID).
KnowledgeItem	A Knowledge Item is a set of **concept** definitions to form a consistent structure, which is managed, protected and published as a whole. It facilitates the management and exchange of **controlled vocabulary**(ies).
Label	A generic term for datatypes designed to hold **free-form text**.
Metadata	Data which asserts something about some other data.
metadata container	A location (e.g. an element or an attribute) in a data structure, designed to hold **Metadata**. In XML it may be implemented as a **metadata element**.
metadata element	An XML element, which is either a **formal metadata element** or a **free-form metadata element**, it implements the notion of a **metadata container**.
named entity	A named entity may be a person, place, event, organization, product name, object name or any other news-related real life entity.
News Architecture	A framework of specifications common to all IPTC news exchange standards of the G2 Family of Standards.
news provider	A provider of news content, the entity responsible for the management of news items May be a news agency, a syndication company, a newspaper, a magazine ... or a blogger.
ontology	See **taxonomy**.
persistent identifier	An identifier which is associated with the same resource for all time. See also **unambiguous identifier**, **unique identifier**, and **globally unique identifier** (GUID).
processor	An application that supports the handling and processing of Items. Also known as a user agent.
property	A synonym term for a **metadata container** – may be implemented as XML element.
provider	See **news provider**.
publish	Make available to other parties involved in the news exchange process, according to the business practices of the provider.

Table 162. Glossary (Continued)

Term	Definition
Qualified code, QCode	A **concept URI** represented by a string of the form sss:ccc, where sss is a **scheme alias** and ccc is a **code**. Examples are iso4217:USD, rfc3066:zh-Hant, nc:15062000, nasdaq:msft and cusip:594918104. A QCode is not the same as a QName (qualified name) [W3C: Namespaces in XML (http:/ /www.w3.org/TR/REC-xml-names/)], though there are substantial similarities. The two main differences are: (i) the code does not have to be a valid XML name (e.g. can start with a digit), and (ii) the scheme alias does not have to be declared using a namespace declaration.
representation	The physical form of something.
representation of a ConceptItem	A manifestation of a given **ConceptItem** that is suited for some particular purpose. The various representations of a given ConceptItem may differ, for example, in whether they are verbose or concise, or in which language(s) they use for name and definition.
resource	A resource is a set of data that has identity.
scheme	A **controlled vocabulary** which is identified by a scheme URI. A scheme is not an anonymous controlled vocabulary.
scheme alias	A character sequence which is used as an abbreviation for a **scheme URI**. A scheme alias is similar but not identical to an XML Namespace prefix.
scheme URI	The URI which identifies the **scheme**. It is recommended to make this URI a URL and resolving it should result in retrieving information about the scheme.
synonym	Synonyms are **concept URI**(s) that refer from one **concept** to another concept with equivalent semantics. Synonymy is a symmetric relationship, which means that if A is synonymous with B, then B is also synonymous with A. An example of synonyms is "cemetery" and "graveyard". In the **News Architecture** synonyms are expressed by the **sameAs** (page 144) property.
target	The data being described by the metadata. The IPTC has chosen to use the term target rather than subject (the term used by RDF [http://www.w3.org/RDF/]), as subject has a special meaning in the context of News.
taxonomy	In a broad sense, taxonomy is the science of classification, but is often taken to mean a particular classification. In the context of the **News Architecture**, a taxonomy is a collection of **concept**(s), with associated **code**(s). A taxonomy may support typed relationships between concepts. Such a taxonomy is sometimes known as an **ontology** or **thesaurus**.
thesaurus	See **taxonomy**.
tuple	A set of values. The word tuple is a generalisation of the sequence: couple, triple, quadruple, quintuple, sextuple, etc. Tuples are conventionally written as a comma-separated list of items, enclosed within braces, e.g. {**scheme alias**, **code**}.
type	See **concept type**.
unambiguous identifier	An identifier is unambiguous if it identifies one and only one object (but an object may have several different unambiguous identifiers). See also **globally unique identifier**.
unconstrained metadata container	A **metadata container** that accepts **code**(s) from any **controlled vocabulary** and of any **concept type**.
unique identifier	The only identifier of a resource. See also **persistent identifier**, **unambiguous identifier**, and **globally unique identifier** (GUID)
Web resource	The data content that can be retrieved from a Web server using a Web-compliant transport protocol. See also **resource**.

12 References

Table 163. References

Subject	Description
IPTC Documents	
NML-BR	IPTC NewsML 2 Business Requirements: http://www.newsml.org/dl.php?fn=NewsML/2.0/specification/NewsML_2.0-spec-BusinessRequirements_1.pdf
EventsML-G2	Specifications for EventsML-G2: http://www.iptc.org/std/EventsML- G2/1.0/specification/
NewsML-G2	Specifications for NewsML-G2: http://www.iptc.org/std/NewsML-G2/2.0/specification
Other References	
XMLSCHEMA-1.0	W3C XML Schema 1.0 specifications at: http://www.w3.org/TR/xmlschema-1/, http://www.w3.org/TR/xmlschema-2/
XSD	W3C XML schema: http://www.w3.org/XML/Schema
XMLDSIG	XML-Signature Syntax and Processing: http://www.w3.org/TR/xmldsig-core/
RDF	Resource Description Framework (RDF): http://www.w3.org/RDF/
BCP47	Tags for Identifying Languages, IETF: http://rfc.net/bcp47.html

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13.1 Elements

13.2 Datatypes

Contact Information

Contact the IPTC by:

Postal mail:
20 Garrick Street
London WC2E 9BT
United Kingdom

Web:

www.iptc.org

Email:

office@iptc.org