NATO STANDARD

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NATO CORE METADATA SPECIFICATION(NCMS)

Edition A, Version 1
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NORTH ATLANTIC TREATY ORGANIZATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

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NATO LETTER OF PROMULGATION

18 November 2022

1. The enclosed Allied Data Publication ADatP-5636, Edition A, Version 1, NATO CORE METADATA SPECIFICATION (NCMS), which has been approved by the nations in the Consultation, Command and Control Board (C3B), is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 5636.

2. ADatP-5636, Edition A, Version 1, is effective upon receipt.

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4. This publication shall be handled in accordance with C-M(2002)60.

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Major General, GRC (A)
Director, NATO Standardization Office

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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.

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CHAPTER 1 INTRODUCTION

1.1. BACKGROUND

Metadata is a key enabler for the effective and efficient management of information, both within and across a multitude of systems and services. It is widely used both in general and by many different Communities of Interests (COIs) to support the handling of COI-specific information. Many COIs have created their own specifications for metadata and formalized them as part of STANAGs and other documentation. Examples of the use of strong metadata specifications can be found in the Information Management, Joint Intelligence Surveillance and Reconnaissance (JISR) COI, Message Text Format (MTF) COI, Geospatial COI and Intelligence COIs.

Whilst the various specifications are targeted towards specific use cases and support a particular community, there is an overlap between metadata information captured by these specifications. Elements such as the confidentiality of a resource, its title, the author, or the time of creation are typically found among these elements. Additional information, e.g. the disposition date, status, its copyright, potential contributors or relationships to other resources, might be useful to effectively manage the resource. Due to these elements being developed through efforts within a specific COI, unfortunately, the naming of these elements is often inconsistent and requires some alignment if metadata based on different specification should be exchanged across COIs, systems and services. The most feasible way to ease and encourage sharing is through the use of an intermediary standard recognized throughout NATO – the Core Metadata Specification. This standard can be adapted, in the future, for Enterprise-wide usage with native adoption by each COI.

This document is the one of the three documents that provide the key components of a consistent, interoperable, metadata infrastructure:

i. ADatP-4774 – "Confidentiality Metadata Label Syntax", which provides support for the Security Layer metadata elements
ii. ADatP-4778 – "Metadata Binding Mechanism", which describes how to consistently bind metadata (of any sort) to a finite data object
iii. ADatP-5636 (this document) "NATO Core Metadata Specification" – which defines the core set of metadata elements that should be used to support interoperable information exchange.

This document (ADatP) provides the normative NATO Core Metadata Specification (highlighted in a red, dashed box in Figure *1*).

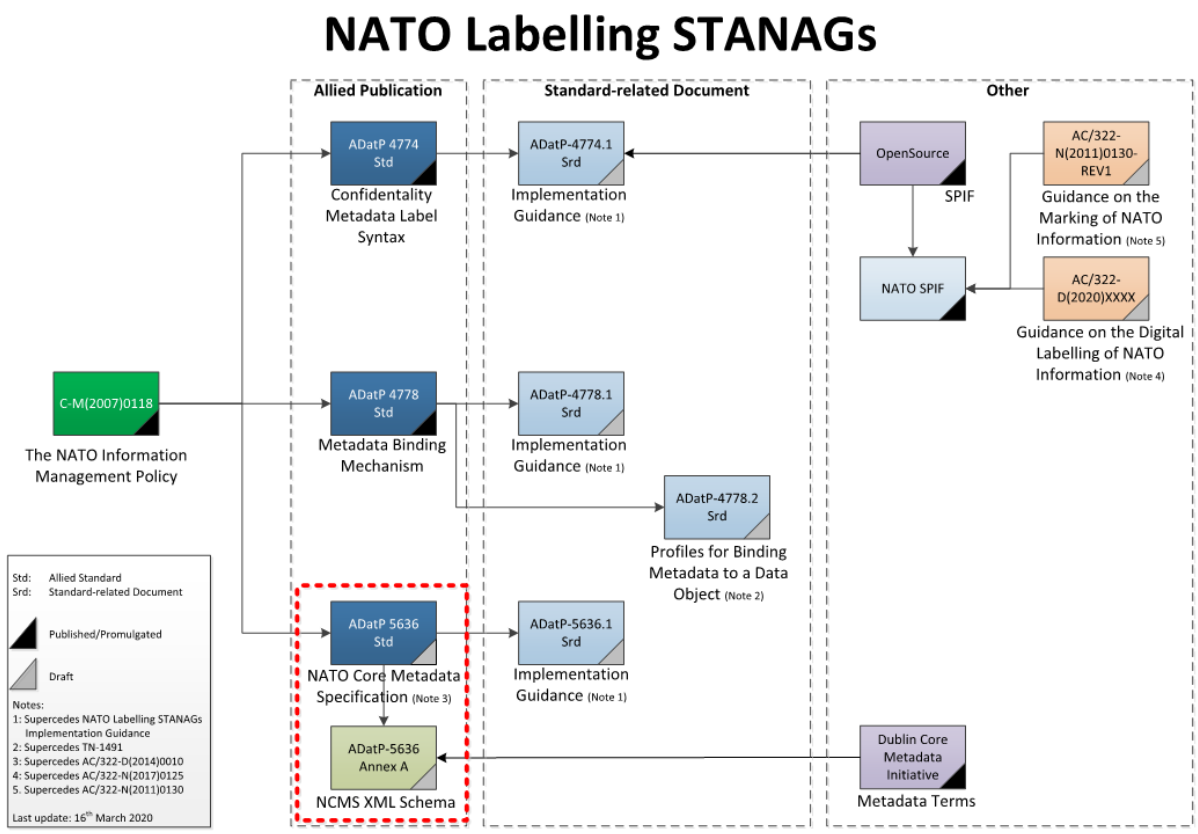

Figure 1 NATO Labelling STANAGs

1.2. OBJECTIVE

This document aims to:

- define a set of commonly used NATO Core Metadata elements to support information management within the Alliance and provides guidance on the implementation of the specification, including the appropriate XML schema definitions.
- expand upon existing standards wherever appropriate and possible and provide a description of the core set of metadata elements and the mechanism with which the metadata can be associated with an information object.
- encourage information sharing by providing a single mediation standard that organisations, enterprises and communities of interest can adopt to provide the interoperable metadata elements for information.

1.3. SCOPE

All NATO information and any other information resource handled by information communication systems within the Alliance needs to be accompanied by metadata to describe the resource and support its consistent and appropriate handling.

The core set of metadata elements, together with the specific representation of the metadata and the mechanism for binding of the metadata to the resource is described in this document.

1.4. VERSION HISTORY

This document provides an update to the core set of metadata elements that are defined in the NATO Core Metadata Specification (NCMS) stated at Reference [3]. This (current) document follows the same layering of the metadata elements as Reference [3], together with the same fields for describing the layers and metadata elements.

This document enhances the Reference [3] with the following changes:

- A new metadata element, hasRedaction, has been introduced to indicate a redacted version of the information,
- A new metadata element, contextActivity, has been introduced to indicate a specific context that may be an operation, exercise, training or education programme which a resource pertains.
- The originally mandatory metadata elements “dateDisposition, Status, Subject” have been made optional.

1.5. ASSUMPTIONS

It is assumed that further Core Metadata elements will be defined in future editions of this specification if any need identified.

1.6. OVERVIEW

This document consist of the following sections

- CHAPTER 1 Provides introduction and briefs the NCMS background. The scope and version history presents there.
- CHAPTER 2 Provides information about NATO Core Metadata Specification structure which are arranged in ‘layers’ – a Security Layer, a Common Layer, and an Information Lifecycle Support Layer.
- CHAPTER 3 Describes the Core Metadata elements in detail.
- CHAPTER 4 Describes the approaches for defining COI Metadata elements.
- CHAPTER 5 References
- CHAPTER 6 Abbreviations
- Annex A, Summarizes the obligations of the elements listed at CHAPTER 2 and CHAPTER 3.
- Annex B Describes the composite values
- Annex C Provides a normative XML schema for the representation of the core metadata elements, together with a binding profile to allow metadata to be associated with metadata.

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CHAPTER 2 NATO CORE METADATA SPECIFICATION

2.1. STRUCTURAL OVERVIEW

The NCMS consists of three sections that are arranged as ‘layers’ – a Security Layer, a Common Layer, and an Information Lifecycle Support Layer.

The Security layer provides the metadata elements for capturing information about sensitivity of a resource.

The Common Layer is primarily based on the elements defined in ISO 15836:2009 as the Dublin Core Metadata Element Set. All basic descriptive metadata elements such as title, creator, description, coverage and various dates are included in this layer. It also includes the elements for administrative and structural metadata such as the format and type of the resource, the copyright, and its relations to other resources.

Within the Common Layer, some elements form groups of functionally related elements. Element groups are logical groupings to improve the structure of the NCMS. They do not require the same type of value to be used by all elements of the group.

The Information Lifecycle Support layer contains elements that directly support information management related tasks such as retention and disposition, downgrading, and deCU of information.

Figure 2 Structural Overview of the NCMSprovides an overview of the three layers and groups of the specification and the metadata elements contained within each layer and group; mandatory elements are shown in bold, red, conditional elements in italic/blue and optional elements in roman/black.

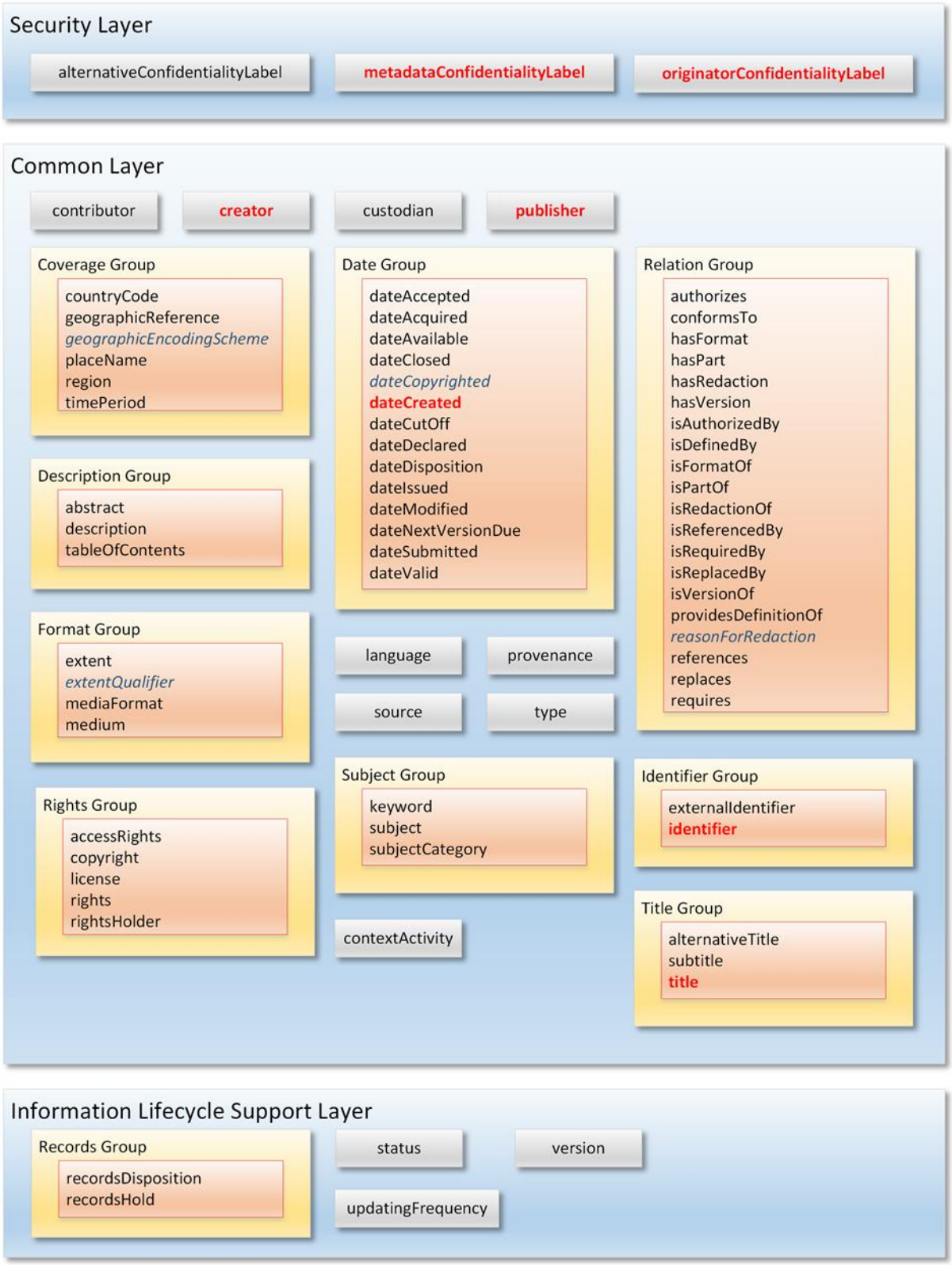


Figure 2 Structural Overview of the NCMS

2.2. EXTENSIBILITY

The NCMS is intended to be a core specification that covers a limited set of metadata elements necessary to support the management of a wide variety of information resources. For this reason, the NCMS is rather concise and its elements are intended to be generally applicable.

COIs typically have additional metadata requirements to capture more specific information about the resources they use. For this reason, the NCMS should be seen as a core set of COI-independent elements that can be augmented by additional layers of COI-specific metadata elements if needed.

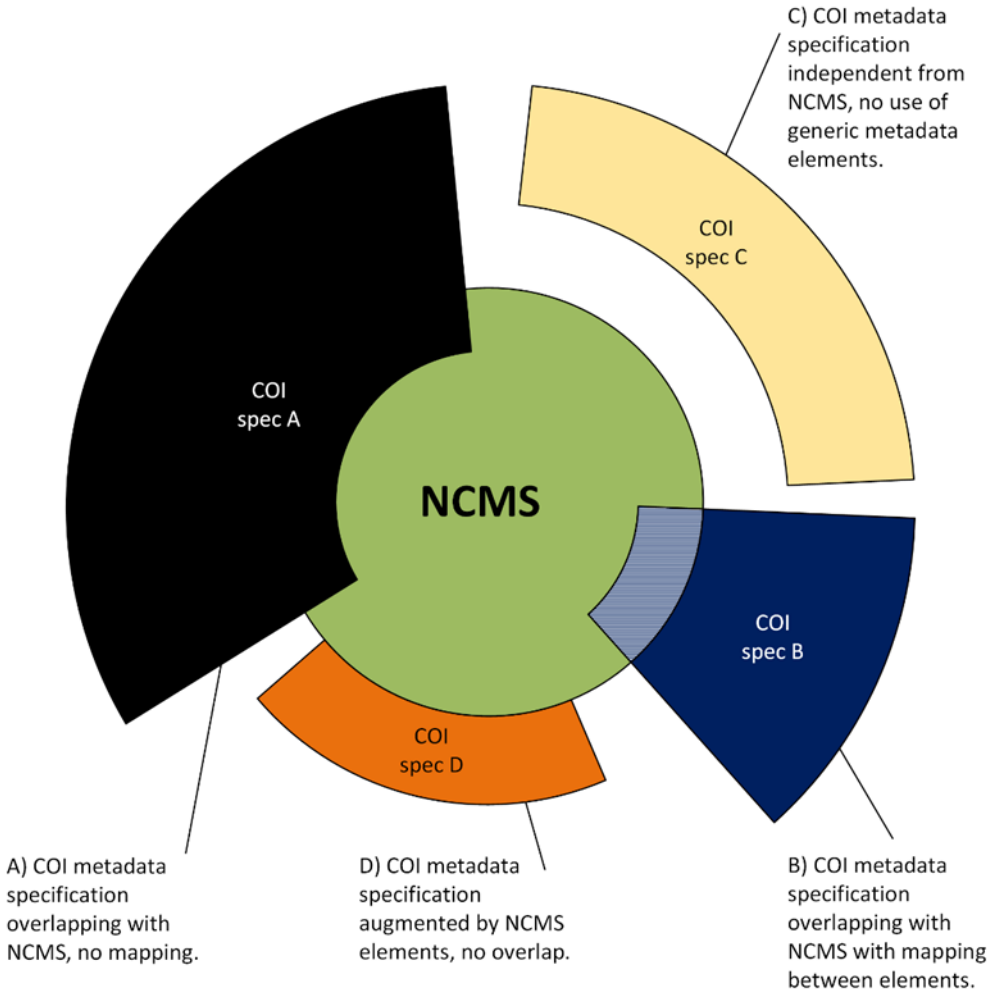


Figure 3 Extending the NCMS with COI Extensions

For existing COI metadata specifications, it is likely that these specifications are not entirely complementary to the NCMS and define general metadata elements that are already covered by the NCMS. These cases are depicted as examples A and B in Figure 3 *Extending the NCMS with COI Extensions*. Example A is a COI specification that overlaps with the NCMS without aligning common elements.

This is not an ideal situation, and needs to be avoided when mandatory NCMS elements are involved, in order to allow for efficient data and information management. Example B depicts an overlap between a COI metadata specification and the NCMS where a mapping is created to align COI elements with their NCMS correspondences.

This is an acceptable short- and medium-element solution when established COI specifications have to be maintained for backwards compatibility with legacy systems. In addition to situations resulting in an overlap between COI metadata specification and the NCMS, it is also possible that there is no connection or overlap with the NCMS at all as shown in example C. This only happens in rare cases for very specialized metadata that does not even use the most generic elements.

Example D shows an ideal solution of extending the NCMS with COI-defined metadata elements. The COI metadata specification uses the NCMS elements as its core and augments it with specialized elements that capture COI-specific metadata.

All newly developed COI metadata specifications shall follow the approach outlined as example D. The existing specifications that overlap with the NCMS (as in examples A and B) should be revised to adopt the NCMS as a core and eliminate the need for mappings. The implementation guidance documentation[1] will provide additional information on how to extend the NCMS in specific environments.

Extending the set of metadata elements defined by the NCMS depends on the particular implementation environment. Additional documentation will provide implementation guidance on how to extend the NCMS for specific environments, in particular the use of mappings as well as the full integration of COI specifications with the NCMS.

2.3 LAYER, GROUP AND METADATA ELEMENT DEFINITION NOTES

The specification uses three structural divisions for organizing metadata:

- **Layers**: Layers provide the highest grouping of metadata elements and are purely intended for structuring the specification. They will not be used as specific metadata about the resource.
- **Metadata Elements**: Each layer contains a number of metadata that are the basic units to describe resources.
- **Groups**: Functionally related metadata elements can be grouped together. Groups are used to provide additional structure to the specification. Similar to layers, they will not be used as specific metadata about the resource.

The following sections provide an overview of the fields that are used to describe the layers, groups, and metadata elements in this specification.

[1] ADatP-5636-SRD.1 Implementation Guidance

2.3.1. Layer

Field Name	Definition
Name	The formal name of the layer. The NATO Core Metadata Specification currently recognizes three layers: Security, Common, and Information Lifecycle Support.
Description	A formal plain text description of the layer and its overall purpose.
Reference	References to the original source material used to develop or derive the layer. These should be the top-level reference documents, if applicable. More specific reference material will be associated with the individual elements.
Comments	Any additional notes and comments regarding this layer shall be documented.

2.3.2. Group

Field Name	Definition
Name	The formal name of the group. Functionally related elements form a group.
Description	A formal plain text description of the group and its overall purpose.
Reference	References to the original source material used to develop or derive the group. These should be top-level reference documents, if applicable. More specific reference material will be associated with the individual elements.
Comments	Any additional notes and comments regarding the group shall be documented.
Elements	Elements contained within the group.

2.3.3. Metadata Element

Field Name	Definition
Name	The formal name of the element must be unique within the core specification, i.e. across all layers. The name shall start with lowercase alphabetical characters and shall use camel-case capitalization if it is a contraction of multiple words.
Obligation	Specifies whether one of the element is mandatory, conditional[2], optional, deprecated or retired[3].
Cardinality	Specifies the minimum and maximum occurrences of an element within the set of metadata associated with an information object. The allowed values are “one” and “many”.

[2] Conditional obligation: when an element’s obligation is listed as “Conditional”, the condition will be listed following a semicolon within the element’s Obligation field.
[3] Retired elements are kept in the specification for reference purposes but shall not be used any longer.

Field Name	Definition
Description	A formal plain text description of the element and its overall purpose.
Representation Term	Specifies the representation term of the metadata element. Representation terms semantically represent the data type of metadata elements and can be seen as a cataloguing based on the type of information captured by the metadata element.
Values	Allowed values based on NATO and non-NATO specifications and standards (e.g. ISO/IEC, W3C). Code lists shall be used wherever possible. References to these code lists should be added as part of the Reference field.
Reference	References to the original source material used to develop this element, This includes the reference to any code lists used for the definition of values.
Comments	Any additional information that is considered helpful for the use and application of the element.
Not to be confused with	For some elements their semantics might be easily confused with other elements. This field provides additional information about the appropriate use of the element.

2.3.3.1. Obligations

The obligation is indicated for each element of the specification (supported by additional colour-coding). Any implementation of the NCMS shall (as a minimum) contain the mandatory elements to ensure the interoperability of metadata based on the specification. The following six obligations are used in the specification:

Obligation	Semantics
Mandatory	An element that must be present and a value must be supplied.
Conditional	The obligation of an element is dependent upon a particular condition, typically the presence of another element.
Optional	An element may be present and supplied a value, but is not required.
Deprecated	An element that is going to be retired and should no longer be used.
Retired	An element that has been retired and shall no longer be used.
Prohibited	An element that shall not be used.

2.3.3.2 Representation Terms and Values

For each element the specification lists its representation term as well as the allowed values. Representation terms semantically represent the data type of metadata elements and can be seen as a classification based on the type of information captured by the element. The following representation terms are used by the NCMS:

Representation Term	Semantics
Code	Code-based enumerated list
ConfidentialityLabel	Confidentiality label, composite, based on NATO Labelling Specification
DateTime	Date and time based on ISO 8601
GeoReference	Geographic Reference
Identifier	Unique identifier to resource in the form of a URI or organizational identifier
Indicator	Boolean, exactly two mutually exclusive values
Name	Name, label or token referring to an object. The name does not need to be unique.
PointOfContact	Point of contact information, composite
Quantity	Numeric quantity
Text	Text as a string of characters
TimeInterval	Time interval, composite, based on DCMI Period

2.4. ALIGNMENT OF ROLES

The NCMS contains a number of elements that are associated with specific roles in the organizational context. Elements like creator capture information about individuals or organizational elements that fulfil a particular role (e.g. creating a resource). Since these roles are tied to workflow processes, the associated metadata elements are among the most important ones in this specification. Two of the five mandatory elements from the Common Layer refer to roles (creator, publisher); two others (*custodian, rightsHolder*) are optional, but are likely to be present for most resources used in a NATO context.

One important decision in the development of the NCMS was the choice of names for elements associated with roles.

Other metadata specifications based on COI, national and industry standards contain similarly named elements that are associated with roles. The underlying semantics are largely identical, e.g. the publisher element in the NCMS can easily be mapped to the corresponding publisher elements in the US DDMS or Dublin Core. The differences are typically in the format of the values. For example, the NCMS and the US DDMS take a composite element as a value for publisher, Dublin Core defines its own Agent Class. Nevertheless, the underlying semantics are very close and allow a mapping between these elements.

Besides mappings to other metadata specifications, an alignment with the roles defined in the NIMP and the PDIM is essential. While the roles identified in the policy and the directive have different names, they can be mapped to the elements defined in the NCMS.

The NCMS uses a naming of elements that is consistent with other metadata specifications instead of a literal alignment with the policy and directive. The reason for this design decision is the technical focus of the NCMS and the likely requirement to map elements between different metadata specifications.

The following table provides an overview of the alignment between the role-related elements of the NCMS with corresponding roles defined in the NIMP and PDIM.

NIMP/PDIM		**NCMS**	
Role	**Description**	**Element**	**Description**
Originator	The nation or international organisation under whose authority the information has been produced or introduced into NATO. **In the NATO context, the roles of originator and owner are currently always performed by the same entity.**	publisher	The entity responsible for making the resource officially available.
Information Owner	The nation or organization which creates and maintains content, defines access rules, negotiates and agrees to release constraints, establishes disposition instructions, and is the authority for the life-cycle of information**. In the NATO context, the roles of originator and owner are currently always performed by the same entity.**	rightsHolder	A person or organization owning or managing rights over the resource.
Information Custodian	The nation or organisation which receives information and makes it visible and is responsible to the information owner for the agreed level of safekeeping and availability of information.	custodian	The organizational element that currently maintains the resource.
Individual	A person authorized by a nation or organization who produces information according to the principles set out in the NIMP.	creator	An entity primarily responsible for creating the resource, or the originator of the resource.

CHAPTER 3 CORE METADATA ELEMENTS

3.1. SECURITY LAYER

Security Layer	
Description	The security layer elements capture information about the sensitivity of the resource and its associated metadata. The elements provide for the specification of confidentiality-related metadata labels and may be used to support access control and releasability.
Reference	C-M(2002)49, C-M(2002)60, AC/322-D(2004)021 (INV), AC/322-D(2004)022 (INV), AC/322-D(2003)021, PO(99)47, AC/322-D(2003)029 (INV), STANAG 4774, AC/35-D/1002-REV6
Comments	The Security layer only defines three 'confidentiality label' metadata elements. The metadata elements correspond to confidentiality label as defined by STANAG 4774. These confidentiality labels include information such as the policy identifier, sensitivity, releasability and additional sensitivity.

3.1.1. alternativeConfidentialityLabel

Layer: Security; Element: alternativeConfidentialityLabel	
Description	An additional alternative confidentiality label assigned to the resource
Obligation	Optional
Cardinality	Many
Representation Term	ConfidentialityLabel
Value	Confidentiality label based on STANAG 4774
Reference	STANAG 4774 Confidentiality Metadata Label Syntax
Comments	The value of this element shall be a data structure representing a valid confidentiality label based STANAG 4774. These confidentiality labels include information about the policy identifier, sensitivity, releasability and additional sensitivity. Note that each label also carries a time stamp (CreationDateTime). This is the time at which the label was generated, which might not be the same time as the creation date of the resource (dateCreated). Each resource could have one or more **alternativeConfidentialityLabel**s assigned in addition to the **originatorConfidentialityLabel**. The **alternativeConfidentialityLabel** may express sensitivity information specific to the environment in which the resource is processed or handled.
Not to be confused with	**originatorConfidentialityLabel** – the **originatorConfidentialityLabel** is specified by the originator of the resources in the originating environment/domain.

3.1.2. metadataConfidentialityLabel

Layer: Security; Element: metadataConfidentialityLabel	
Description	The confidentiality label assigned to the metadata set associated with the resource.
Obligation	Mandatory
Cardinality	One
Representation Term	ConfidentialityLabel
Value	Confidentiality label based on STANAG 4774
Reference	STANAG 4774 Confidentiality Metadata Label Syntax
Comments	The value of this element shall be a data structure representing a valid confidentiality label based on STANAG 4774.The label provides a structure to include information about policy identifier, sensitivity, releasability and dissemination. Note that each label also carries a time stamp (CreationDateTime). This is the time at which the label was generated, which might not be the same time as the creation date of the resource (dateCreated). The metadata associated with each resource shall be assigned a confidentiality label to express its sensitivity. This will allow separate sensitivities for the resource and its metadata.
Not to be confused with	**originatorConfidentialityLabel, alternativeConfidentialityLabel** – **originatorConfidentialityLabel** and **alternativeConfidentialityLabel** refer to the resource itself, not to its associated metadata set.

3.1.3. originatorConfidentialityLabel

Layer: Security; Element: originatorConfidentialityLabel	
Description	The confidentiality label assigned to the resource by the originator
Obligation	Mandatory
Cardinality	One
Representation Term	ConfidentialityLabel
Value	Confidentiality label based on STANAG 4774
Reference	STANAG 4774 Confidentiality Metadata Label Syntax
Comments	The value of this element shall be a data structure representing a valid confidentiality label based on STANAG 4774.The label provides a structure to include information about policy identifier, sensitivity, releasability and dissemination. Note that each label also carries a time stamp (CreationDateTime). This is the time at which the label was generated, which might not be the same time as the creation date of the resource (dateCreated).
Not to be confused with	**alternativeConfidentialityLabel** – the **alternativeConfidentialityLabel** is used to capture the equivalent information about a resources sensitivity that is received in a different environment/domain that is covered by the **originatorConfidentialityLabel**.

3.2. COMMON LAYER

Common Layer	
Description	The Common layer provides descriptive and administrative metadata elements to support maintenance, administration, and the derivation of the data asset. It also provides elements to capture information about the physical or digital manifestation of the resource. The description of concepts and additional contextual aspects of the data asset being tagged and include such elements as subject, description, and coverage. These elements are intended to capture asset-level information that describes the content and/or context.
Reference	ISO/IEC 15836:2003 – The Dublin Core Metadata Element Set
Comments	This layer is a streamlined and closely aligned subset of the Dublin Core metadata elements set (ISO/IEC 15836), although it includes additional elements not in Dublin Core that are needed in the Alliance context (e.g. for format and for temporal and geospatial coverage).

3.2.1. Contributor

Layer: Common; Element: contributor	
Description	An entity responsible for making contributions to the content of the resource.
Obligation	Optional
Cardinality	Many
Representation Term	PointOfContact
Value	Point of Contact (as UTF-8 encoded text)
Reference	STANAG 5636 Core Metadata Elements
Comments	Contributors are typically individuals, systems or services that have added content or modified the resource. For example, any co-author of a document (other than the primary author who should be listed as the **creator**) should be included as a **contributor**. Within the NATO Information Management context, the **contributor** corresponds to the role of an Individual as defined by the NIMP / PDIM (also see **creator**). If possible, the values for the components should come from an official source, such as the official directory of the organization or an approved list of entities (including officially recognized systems and services) that are allowed to modify a resource. Give full contact details if possible, especially when they are not to be given elsewhere. There are situations where contributors have legal responsibilities and obligations, and names may be needed for audit trails.
Not to be confused with	**creator –** The **creator** is the main entity responsible for the initial creation of the resource; the **contributor** has added content or modified the resource, but is not primarily responsible for the creation of the resource. **custodian** – The **custodian** is an organizational element that is currently responsible for maintaining the resource. **publisher** - The **publisher** is the organizational element that makes the resource available.

3.2.2. Coverage Group

Layer: Common; Group: Coverage	
Description	The temporal and spatial extent or scope of the content of the resource.
Reference	-
Comments	Typically, the Coverage group will capture information about spatial location (a place name or geographic coordinates), temporal period (a period label, date, or date range) or jurisdiction (such as a named administrative entity). Recommended best practice is to select a value from a controlled vocabulary (for example, the Thesaurus of Geographic Names [TGN]) and to use, where appropriate, named places or time periods in preference to numeric identifiers such as sets of coordinates or date ranges. Metadata will usually be captured by using the specific elements in the **Coverage** group.
Elements	**countryCode** **geographicReference** **geographicEncodingScheme** **placeName** **region** **timePeriod**

3.2.2.1. countryCode

Layer: Common; Group: Coverage; Element: countryCode	
Description	A standards-based abbreviation of a country name.
Obligation	Optional
Cardinality	Many
Representation Term	Code
Value	2 or 3-letter country code based on agreed NATO list of country codes (as UTF-8 encoded text)
Reference	Agreed NATO list of country codes
Comments	Agreed NATO 2- and 3-letter codes.
Not to be confused with	**language –** country codes are distinct from languages, as there can be multiple languages spoken in one country, or a language can be spoken in multiple countries. The language of a resource is covered by the **language** element using ISO 639-3 three-letter codes

3.2.2.2. geographicReference

Layer: Common; Group: Coverage; Element: geographicReference	
Description	A geographic reference specified using a particular encoding scheme.
Obligation	Optional
Cardinality	Many
Representation Term	GeoReference
Value	Coordinate (point) Set of coordinates (bounding box, polygon)
Reference	DCMI Point - http://dublincore.org/documents/dcmi-point/ DCMI Box - http://dublincore.org/documents/dcmi-box/
Comments	-
Not to be confused with	-

3.2.2.3. geographicEncodingScheme

Layer: Common; Group: Coverage; Element: geographicEncodingScheme	
Description	The applicable scheme used to encode geographical references.
Obligation	Conditional: Mandatory if **geographicReference** is used, Prohibited otherwise.
Cardinality	One
Representation Term	Identifier
Value	URI
Reference	ISO 19107 – Geographic Information – Spatial schema DCMI Point - http://dublincore.org/documents/dcmi-point/ DCMI Box - http://dublincore.org/documents/dcmi-box/
Comments	This element should be specified if **geographicReference** is provided. The schemas indicates how the reference should be interpreted. The URI can also point to applicable documentation on the format of the geographical reference. For example, DCMI Point is described under http://dublincore.org/document/dcmi-point
Not to be confused with	-

3.2.2.4. placeName

Layer: Common; Group: Coverage; Element: placeName	
Description	The name of a place of interest, other than a country or region.
Obligation	Optional
Cardinality	Many
Representation Term	Name
Value	Agreed vocabulary of place names, gazetteering (as UTF-8 encoded text)
Reference	-
Comments	For named geographical entities such as cities, roads, and rivers, the values for this element could come from an agreed vocabulary. These vocabularies are typically used for gazetteering and ensure consistent spelling of place names. If no agreed vocabulary is available, plain text descriptions should be allowed.
Not to be confused with	-

3.2.2.5. region

Layer: Common; Group: Coverage; Element: region	
Description	The name of a sub-national or transnational geographic or geopolitical region that is a subject of the resource.
Obligation	Optional
Cardinality	Many
Representation Term	Code
Value	ISO Province code based on agreed NATO list of country codes (as UTF-8 encoded text)
Reference	Agreed NATO list of country codes
Comments	Only the province codes listed in the agreed NATO list of country codes should be used; do not use the former NATO Province codes. For example, for the state of Illinois, use US-IL, not US17.
Not to be confused with	**countryCode** – a country typically consists of multiple regions.

3.2.2.6. timePeriod

Layer: Common; Group: Coverage; Element: timePeriod	
Description	The time period that the content of the resource covers.
Obligation	Optional
Cardinality	Many
Representation Term	TimeInterval
Value	DCMI Period (as UTF-8 encoded text)
Reference	DCMI Period Encoding Scheme, http://dublincore.org/documents/dcmi-period/ ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	If the resource covers only a particular date or range of dates, **timePeriod**may be used to express those dates. This may be important if the resource will be retained over time but it only refers to a particular period or until a particular date. Multiple time periods are permitted. The temporal coverage of the resource is represented using the DCMI Period encoding scheme. The scheme allows for four optional components –start, end, name, scheme – separated by a semicolon (;). The default encoding scheme for start and end is ISO 8601:2004 and should not be changed to ensure compatibility with the values of other date elements in this specification. Do not use the optional scheme component. If either the start or end date is not specified the interval is unbounded.
Not to be confused with	**valid** – the coverage of the resource makes no claims about the validity of the resource. A resource can be valid long after the recorded time interval.

3.2.3. creator

Layer: Common; Element: creator	
Description	An entity primarily responsible for creating the resource, or the originator of the resource.
Obligation	Mandatory
Cardinality	One
Representation Term	PointOfContact
Value	Point of Contact (as UTF-8 encoded text)
Reference	-
Comments	The **creator** should be an individual, a system or a service. Other NATO documentation (NIMP, PDIM) also refers to the **creator** as the individual that produces a resource. The elements **creator**, **contributor**, and **publisher** are used to maintain alignment with ISO 15836:2009 (Dublin Core). Within the NATO Information Management context, the **creator** corresponds to the role of an Individual as defined by the NIMP / PDIM (also see **contributor**). The value for this element shall use the six components defined for Point of Contact information – type, name, affiliation, address, email, phone – separated by a semicolon (;). Of these components only type and name are mandatory. If possible, the value for the components should come from an official source, such as the official directory of the organization or an approved list of entities (including officially recognized systems and services) that are allowed to create new resources. Give full contact details if possible, especially when they are not to be given elsewhere. There are situations where the **creator** has legal responsibilities and obligations, and names may be needed for audit trails. Note that each resource has exactly one **creator**. If multiple entities were involved in the creation of the resource, only the primarily responsible entity should be listed as the **creator**; all other entities should be listed as **contributors**.

Not to be confused with	**contributor** - The **creator** is the main entity responsible for the initial creation of the resource; the **contributor** has added content or modified the resource, but is not primarily responsible for the creation of the resource. **custodian** – The **custodian** is an organizational element that is currently responsible for maintaining the resource. . **publisher** - The **publisher** is the organizational element that makes the resource available.

3.2.4. Custodian

Layer: Common; Element: custodian	
Description	The organizational element that currently maintains the resource.
Obligation	Optional
Cardinality	One
Representation Term	PointOfContact
Value	Point of Contact (as UTF-8 encoded text)
Reference	AC/322-N(2013)0134 – Definition of the NATO Enterprise for the delivery of C3 Capabilities and Information and Communications Technology Services
Comments	The **custodian** is the current maintainer of the resource. It officially handles all day-to-day activities related to the resource. The **custodian** is the organizational element a user needs to contact in order to obtain permission to modify the information contained in the resource or to obtain copies in a different format. Within the NATO Information Management context, the **custodian** corresponds to the role of the Information Custodian as defined by the NIMP / PDIM. The value for this element shall use the six components defined for Point of Contact information – type, name, affiliation, address, email, phone – separated by a semicolon (;). Of these components only type and name are mandatory. At the time of initial publishing the **publisher** and the **custodian** are typically the same organizational element. However, organizational structures change. If a **publisher** ceases to exist, another organizational element might become the **custodian** for a resource. The final custodian for a resource of permanent value will be NATO Archives. Any resource should have only one **custodian**.
Not to be confused with	**creator –** The **creator** is the main entity responsible for the initial creation of the resource; the **contributor** has added content or modified the resource, but is not primarily responsible for the creation of the resource. **contributor** - The **creator** is the main entity responsible for the initial creation of the resource; the **contributor** has added content or modified the resource, but is not primarily responsible for the creation of the resource. **publisher** - The **publisher** is the organizational element that makes the resource available.

3.2.5. Date Group

Layer: Common; Group: Date	
Description	A collection of metadata elements for capturing a calendar date and time associated with an event in the life cycle of the resource.
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	Typically, dates of some sort will be associated with the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3CDTF] and includes (among others) dates of the form YYYY-MM-DD. Recommended practice is that date be specified in one of the following formats: YYYY YYYY-MM YYYY-MM-DD YYYY-MM-DDThh:mmZ YYYY-MM-DDThh:mm:ssZ YYYY-MM-DDThh:mm:ss.sZ Where: YYYY 0000 through current year MM 01 through 12 (month) DD 01 through 31 (day) hh 00 through 24 (hour) mm 00 through 59 (minute) ss 00 through 60 (second) .s .0 through 999 (fractional second) Times (T) are expressed in UTC (Coordinated Universal Time), with a special UTC designator ("Z").

Elements	**dateAccepted** **dateAcquired** **dateAvailable** **dateClosed** **dateCopyrighted** **dateCreated** **dateCutOff** **dateDeclared** **dateDisposition** **dateIssued** **dateModified** **dateNextVersionDue** **dateSubmitted** **dateValid**

3.2.5.1. dateAccepted

Layer: Common; Group: Date; Element: dateAccepted	
Description	The date on which a resource was accepted (by a department or an organizational element)
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	-
Not to be confused with	-

3.2.5.2. dateAcquired

Layer: Common; Group: Date; Element: dateAcquired	
Description	The date on which the resource was received into the organization.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	For messages received at a particular time, **dateAcquired** can be used in a format that captures the particular point in time. For example, **dateAcquired**: 2004-07-04T06:37
Not to be confused with	-

3.2.5.3. dateAvailable

Layer: Common; Group: Date; Element: dateAvailable	
Description	The date on which a resource became or will become available.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	-
Not to be confused with	-

3.2.5.4. dateClosed

Layer: Common; Group: Date; Element: dateClosed	
Description	The date from which the resource should no longer be referenced or included in a collection of resources.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	-
Not to be confused with	**dateValid** - a resource can be valid after it has been closed.

3.2.5.5. dateCopyrighted

Layer: Common; Group: Date; Element: dateCopyrighted	
Description	The date of a statement of copyright.
Obligation	Conditional: Optional if **copyright** is used, Prohibited otherwise.
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	This element should be specified when a resource is copyrighted. Also see the **copyright** element in the **Rights** group.
Not to be confused with	**copyright** – The **copyright** element indicates whether a resource is copyrighted using a Boolean value. The **dateCopyrighted** specifies the date or year of the copyright.

3.2.5.6. dateCreated

Layer: Common; Group: Date; Element: dateCreated	
Description	The date on which the resource was created.
Obligation	Mandatory
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	Note that for documents the date of creation is typically different from the date of publication (**dateIssued**) and the date when the resource was declared, filed, or stored (**dateDeclared**). For a press release approved and sent to editors on 2 January 2005 but not available for public viewing until11:00 a.m. the following day **dateCreated**: 2005-01-02 **dateIssued**: 2005-01-03T11:00 The creation date is mandatory and should typically be system-generated.
Not to be confused with	

3.2.5.7. dateCutOff

Layer: Common; Group: Date; Element: dateCutOff	
Description	The date from which the resource should no longer be added to or modified.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	For a spreadsheet which will be replaced at the end of the financial year **dateCutOff**: 2005-12-31
Not to be confused with	dateClosed the date from which the resource should no longer be referenced or included in a collection of resources.

3.2.5.8. dateDeclared

Layer: Common; Group: Date; Element: dateDeclared	
Description	Date on which the resource was declared, filed or stored.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	-
Not to be confused with	**dateAvailable** **dateIssued**

3.2.5.9. dateDisposition

Layer: Common; Group: Date; Element: dateDisposition	
Description	The disposition date of the resource, i.e. the date when the resource will be archived or destroyed.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times” C-M(2009)0021 Policy on Retention and Disposition of NATO Information AC/324-D(2010)0003 Retention and Disposition Directive for NATO Committee Documents AC/324-D(2012)0003 NATO Strategy for Long Term Preservation of Digital Information
Comments	The element recordsDisposition indicates whether the resource has been archived or destroyed. Note that the disposition date of the resource can be in the future, indicating the date on which an appraisal will happen to archive or destroy the resource, or in the past, indicated that the resource has existed and was disposed. Metadata shall be kept even for disposed resources.
Not to be confused with	-

3.2.5.10. dateIssued

Layer: Common; Group: Date; Element: dateIssued	
Description	The date of formal issuance or publication of the resource.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	The issue date is typically the date found on a document by which it content will become effective. It is different from the creation date. For a home page that went live on 6 January 2005 **dateIssued**: 2005-01-06
Not to be confused with	**dateAvailable** **dateCreated** **dateDeclared**

3.2.5.11. dateModified

Layer: Common; Group: Date; Element: dateModified	
Description	The date on which the resource was changed.
Obligation	Optional
Cardinality	Many
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	Modified dates may be used to record either all instances of modification or only the latest. When only one modified date is recorded, it is assumed to be the latest. For a home page that went live on 6 January 2005 and has been edited the following 1 May 2015 **dateIssued**: 2005-01-06 **dateModified**: 2005-05-01
Not to be confused with	-

3.2.5.12. dateNextVersionDue

Layer: Common; Group: Date; Element: dateNextVersionDue	
Description	The date on which the resource is due to be superseded.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	-
Not to be confused with	**dateCutOff**

3.2.5.13. dateSubmitted

Layer: Common; Group: Date; Element: dateSubmitted	
Description	The date on which a resource was submitted.
Obligation	Optional
Cardinality	One
Representation Term	DateTime
Value	ISO 8601, W3CDTF
Reference	ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	-
Not to be confused with	-

3.2.5.14. dateValid

Layer: Common; Group: Date; Element: dateValid	
Description	The date of validity of a resource.
Obligation	Optional
Cardinality	Many
Representation Term	TimeInterval
Value	DCMI Period (as UTF-8 encoded text)
Reference	DCMI Period Encoding Scheme, http://dublincore.org/documents/dcmi-period/ ISO 8601:2004 “Data elements and interchange formats – Information interchange – Representation of dates and times”
Comments	If the resource is only valid or relevant for a particular date or range of dates, **valid** may be used to express those dates. This may be particularly important if the resource will be retained over time but its use is valid only during a particular period or until a particular date. Multiple validity periods are permitted. The validity of the resource is represented using the DCMI Period encoding scheme. The scheme allows for four optional components –start, end, name, scheme – separated by a separation character (;). The default encoding scheme for start and end is ISO 8601:2004 and should not be changed to ensure compatibility with the values of other date terms in this specification. Do not use the optional scheme component. If either the start or end date is not specified the interval is unbounded.
Not to be confused with	**dateClosed** - the date from which the resource should no longer be referenced or included in a collection of resources. **timePeriod** –a resource can be valid long after the recorded time interval. The coverage of the resource makes no claims about the validity of the resource.

3.2.6. Description Group

Layer: Common; Group: Description	
Description	The Description group provides elements for capturing an overview of the contents of the resource.
Reference	-
Comments	The Description group contains elements for describing the contents of the resource as a brief (one page) summary (**description**), an even shorter (one paragraph) abstract often used in official publications (**abstract**), and a list of the chapters and sections of the resource (if applicable, **tableOfContents**). Note that the Description group contains an element with the name **description**. Metadata is captured by using this element.
Elements	**abstract** **description** **tableOfContents**

3.2.6.1. abstract

Layer: Common; Group: Description; Element: abstract	
Description	The abstract is a summary of the content of the resource.
Obligation	Optional
Cardinality	One
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	The abstract is typically a very short summary of the content of the resource, not exceeding a couple of paragraphs. It might be an abbreviated version of the description, focussing of the key aspects of the resource.
Not to be confused with	-

3.2.6.2. description

Layer: Common; Group: Description; Element: description	
Description	The description is a description of the resource.
Obligation	Optional
Cardinality	One
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	A description of a resource typically is a brief free-text account of the content of the resource. It is intended to help the user to assess whether the resources fits a particular need. The description could cover aspects such as: • the approach to subject (e.g. critique, explanation, beginners guide) • the reason for production of resource (e.g. to inform, invite comments) • any groups and organizations referred to • events covered by the resource • key outcomes Keep the description as brief as possible and try not to repeat information that could be held in another element (e.g. title, coverage or subject). In many case, the description can be derived from the summary of a document. Use the elements **abstract** and **tableOfContents** to cover additional information.
Not to be confused with	**subject** **title**

3.2.6.3. tableOfContents

Layer: Common; Group: Description; Element: tableOfContents	
Description	The table of contents is a formatted outline of the structure of resource, typically listing the sub-units (chapters, sections) of the source.
Obligation	Optional
Cardinality	One
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	The formatting of the table of content might in some cases be difficult to maintain as part of the metadata. For example, when metadata is transferred between systems that interpret formatting characters differently. Note that there are multiple ways of specifying table of content information (MS Word, LaTeX, etc.). A plain-text representation without system specific formatting would be the preferred solution. Separate entries by ';', do not include page numbers (as these depend on the formatting of the resource).
Not to be confused with	-

3.2.7. Format Group

Layer: Common; Group: Format	
Description	A group providing elements for capturing information about the file format, physical medium, or dimensions of the resource.
Reference	http://www.iana.org/assignments/media-types/
Comments	Separate metadata should be created for each format of the resource, rather than one entry with several formats listed. Each instance will be a separate resource. Use the Relation Group 'hasFormat' and 'isFormatOf' elements to indicate when the resource is available in other formats. The format may include the media type or dimensions of the resource. It may also be used to determine the software, hardware or other equipment needed to display or operate the resource. Examples of dimensions include size and duration.
Elements	**extent** **extentQualifier** **mediaFormat** **medium**

3.2.7.1. extent

Layer: Common; Group: Format; Element: extent	
Description	The size or duration of the resource.
Obligation	Optional
Cardinality	One
Representation Term	Quantity
Value	Numeric
Reference	-
Comments	The **extent** is the data size, compression rate, or pixel size (etc.) of the resource. The value for this element should be numeric, without a unit. The qualifier should be used to specify the unit for the extent.
Not to be confused with	-

3.2.7.2. extentQualifier

Layer: Common; Group: Format; Element: extentQualifier	
Description	The unit applicable to the extent of the resource.
Obligation	Conditional: Mandatory if **extent** is used, Prohibited otherwise.
Cardinality	One
Representation Term	Code
Value	Approved list or taxonomy of units (as UTF-8 encoded text).
Reference	-
Comments	If extent is used, a unit has to be supplied for the numeric value. Units should come from a list or taxonomy of approved units. Units might be specified as commonly used acronyms (kB for kilobytes, or s for seconds). SI units should be used whenever possible.
Not to be confused with	-

3.2.7.3. mediaFormat

Layer: Common; Group: Format; Element: mediaFormat	
Description	The format of the media used for the resource
Representation Term	Code
Value	Internet Media Types [MIME] (as UTF-8 encoded text)
Reference	http://www.iana.org/assignments/media-types/
Comments	The MIME type for the product object to which this metadata applies. The MIME type is expressed as: layer/specific-type, such as “image/gif”.
Not to be confused with	**type** – **format** looks at the actual format of the resource; **type** considers the content. **mediaFormat** includes hard or electronic copy, and the software needed to access the resource; **type** describes the category of the information in the resource, e.g. minutes, annual report.

3.2.7.4. medium

Layer: Common; Group: Format; Element: medium	
Description	The physical medium or instantiation of the resource
Obligation	Optional
Cardinality	One
Representation Term	Code
Value	Approved list or taxonomy of physical media (as UTF-8 encoded text)
Reference	-
Comments	The physical or digital instantiation of a resource should be specified via **medium**. If content exists on different media, a new metadata record should be produced for each instantiation. An agreed list or taxonomy of physical or digital media should be used for specifying the value of this element.
Not to be confused with	**format –** the **format** is the MIME type of the resource, the **medium** is the (physical or digital) format of the resource.

3.2.8. Identifier Group

Layer: Common; Group: Identifier	
Description	The Identifier group provides metadata elements for unambiguous references to the resource within a given context.
Reference	-
Comments	Identifiers are unique labels for representing a resource by means of a string or number conforming to a formal identification system. The documentation for this identification system and a schema representation of it should be readily available. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system used by the organization. Identification codes automatically allocated by records and content management systems can be used. NATO uses a number of different identifiers, often specific to the organizational elements (HQ, commands, agencies etc.).
Elements	**externalIdentifier** **identifier**

3.2.8.1. externalIdentifier

Layer: Common; Group: Identifier; Element: externalIdentifier	
Description	An external reference to the resource associated with the resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	UTF-8 encoded text
Reference	-
Comments	An external identifier is an identification label for representing a resource by means of a string or number conforming to a formal identification system. Formal identification systems include but are not limited to the Uniform Resource Identifier (URI) (including the Uniform Resource Locator (URL)), the Digital Object Identifier (DOI) and the International Standard Book Number (ISBN). External identifiers are typically provided with resources that have not been created within the organization itself, e.g. documents that have been imported or other externally acquired resources. The external identifier might also follow a national classification schema, e.g. the national identifier for documents provided to NATO.
Not to be confused with	**identifier** – the **identifier** is the primary identification element of the resource. It will be assigned to all resources, whether they are created within the organization or acquired externally. The **externalIdentifier** is provided with the resources and follows an existing (external) classification schema.

3.2.8.2. Identifier

Layer: Common; Group: Identifier; Element: identifier	
Description	An unambiguous reference to the resource within a given context.
Obligation	Mandatory
Cardinality	Many
Representation Term	Identifier
Value	UTF-8 encoded text
Reference	-
Comments	An identifier is a unique label for representing a resource by means of a string or number conforming to a formal identification system. Recommended best practice is to identify the resource by means of a string or number conforming to a formal identification system. Identification codes automatically allocated by records and content management systems can be used.
Not to be confused with	**externalIdentifier** – the **identifier** is the primary identification element of the resource. It will be assigned to all resources, whether they are created within the organization or acquired externally. The **externalIdentifier** is provided with the resources and follows an existing (external) classification schema.

3.2.9. language

Layer: Common; Element: language	
Description	The language(s) of the content of the resource.
Obligation	Optional
Cardinality	Many
Representation Term	Code
Value	ISO 639-3 three-letter primary language tag (as UTF-8 encoded text)
Reference	[ISO 693-3]
Comments	Multiple languages are allowed for resources that contain sections in different languages. Note that the language of a resource should not be confused with country codes. For example, the country codes defined in the agreed NATO list of country codes do not apply to the **language** element.
Not to be confused with	**countryCode** **region**

3.2.10. contextActivity

Layer: Common; Element: contextActivity	
Description	The contextActivity is the name of the operation, exercise or education programme, if any, to which a resource pertains.
Obligation	Optional
Cardinality	One
Representation Term	Code
Value	UTF-8 encoded text
Reference	-
Comments	The value should be drawn from a list of known operations, exercise or education programme any kind of specific context, but may also be a free form text. The contextActivity name must not be embedded in the originatorConfidentialityLabel.
Not to be confused with	**originatorConfidentialityLabel**

3.2.11. provenance

Layer: Common; Element: provenance	
Description	A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity and interpretation. The statement may include a description of any changes successive custodians made to the resource.
Obligation	Optional
Cardinality	Many
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	The statement may include a description of any changes successive custodians made to the resource. It uses a plain text description and is a less formal than the **relation** elements which link resources by their identifiers.
Not to be confused with	**relation**

3.2.12. publisher

Layer: Common; Element: publisher	
Description	The entity responsible for making the resource officially available.
Obligation	Mandatory
Cardinality	One
Representation Term	PointOfContact
Value	Point of Contact (as UTF-8 encoded text)
Reference	AC/322-N(2013)0134 – Definition of the NATO Enterprise for the delivery of C3 Capabilities and Information and Communications Technology Services
Comments	The **publisher** is used to identify the entity responsible for releasing the resource and represents the resource to the outside (not the **creator**). Other NATO documentation (NIMP, PDIM) also refers to the **publisher** as the information owner and originator. The elements **creator**, **contributor**, and **publisher** are used to maintain alignment with ISO 15836:2003 (Dublin Core). Within the NATO Information Management context, the **publisher** corresponds to the Originator role as defined by the NIMP / PDIM. The value for this element shall use the six components defined for Point of Contact information – type, name, affiliation, address, email, phone – separated by a semicolon (;). Of these components only type and name are mandatory. Publishers other than those defined as part of the NATO Enterprise should be allowed. The publisher has certain legal rights and responsibilities regarding the resource, and should be an organizational element selected from an agreed list of elements that can represent the organization. Note that in the NATO Information Management context the Originator and Information Owner roles are filled by the same entity. For ownership information about the resource the **rightsHolder** element should be used. Any resource shall have exactly one publisher. Another entity might become the custodian for a resource.
Not to be confused with	**creator –** The **creator** is the main entity responsible for the initial creation of the resource; the **contributor** has added content or modified the resource, but is not primarily responsible for the creation of the resource. **contributor** - The **creator** is the main entity responsible for the initial creation of the resource; the **contributor** has added content or modified the resource, but is not primarily responsible for the creation of the resource. **custodian** – The **custodian** is an organizational element that is currently responsible for maintaining the resource. **rightsHolder** - Ownership information and legal rights can be explicitly stated by using the **rightsHolder** element.

3.2.13. Relation Group

Layer: Common; Group: Relation	
Description	The Relation group provides metadata elements to capture references to related resources.
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources. When using elements from this group, use the most specific one applicable. Relation can be used to allow cascading retrieval of interrelated objects. It is also invaluable for linking items in multiple parts, different versions of the same resource and items available in multiple formats.
Elements	**authorizes** **conformsTo** **hasFormat** **hasPart** **hasRedaction** **hasVersion** **isAuthorizedBy** **isDefinedBy** **isFormatOf** **isPartOf** **isRedactionOf** **isReferencedBy** **isRequiredBy** **isReplacedBy** **isVersionOf** **providesDefinitionOf** **reasonForRedaction** **references** **replaces** **requires**

3.2.13.1. authorizes

Layer: Common; Group: Relation; Element: authorizes	
Description	The resource provides an authorization for another resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Resources can provide the authorization of others. This element captures such an authorization of another resource. Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	-

3.2.13.2. conformsTo

Layer: Common; Group: Relation; Element: conformsTo	
Description	A reference to an established standard to which the resource conforms.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	-

3.2.13.3. hasFormat

Layer: Common; Group: Relation; Element: hasFormat	
Description	The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**format – format** is the physical format of the resource. **isFormatOf –** this is the inverse of **hasFormat.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.4. hasPart

Layer: Common; Group: Relation; Element: hasPart	
Description	The described resource includes the referenced resource either physically or logically.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**isPartOf** - this is the inverse of **hasPart.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.5. hasRedaction

Layer: Common; Group: Relation; Element: hasRedaction	
Description	The described resource has a redacted version, namely the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**isRedactionOf** - this is the inverse of **hasRedaction.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.6. hasVersion

Layer: Common; Group: Relation; Element: hasVersion	
Description	The described resource has a version edition or adaptation, namely the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**isVersionOf** - this is the inverse of **hasVersion.** For completeness both relations could be included in the metadata of the two resources. **version** - this element captures the actual version of the resource itself, while **hasVersion** expresses the relationship between resources, i.e. that resource A is a version of resource B.

3.2.13.7. isAuthorizedBy

Layer: Common; Group: Relation; Element: isAuthorizedBy	
Description	The resource that provides an authorization for this resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Resources can be authorized by others. This element captures the relationship between resources, i.e. which resources provide the authorization. Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	-

3.12.3.8. isDefinedBy

Layer: Common; Group: Relation; Element: isDefinedBy	
Description	The described resource is given an effective working definition by the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**providesDefinitionOf -** this is the inverse of **isDefinedBy.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.9. isFormatOf

Layer: Common; Group: Relation; Element: isFormatOf	
Description	The described resource is the same intellectual content of the referenced resource, but presented in another format.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**hasFormat** - this is the inverse of **isFormatOf.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.10. isPartOf

Layer: Common; Group: Relation; Element: isPartOf	
Description	The described resource is a physical or logical part of the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	When the described resource is part of another, it may be possible for it to inherit metadata elements from the parent resource. For example, the subject metadata of a folder may be inherited by all of the files within that folder. Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**hasPart** - this is the inverse of **isPartOf.** For completeness, both relations could be included in the metadata of the two resources.

3.2.13.11 isRedactionOf

Layer: Common; Group: Relation; Element: isRedactionOf	
Description	The resource is a redacted version of another resource, with some part of the content marked or removed to make the remainder of the content releasable.
Obligation	Optional
Cardinality	One
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal resources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external resources.
Not to be confused with	**hasRedaction** - this is the inverse of **isRedactionOf.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.12. reasonForRedaction

Layer: Common; Group: Relation; Element: reasonForRedaction	
Description	The reason for the publication of a redaction or extract.
Obligation	Conditional: Optional if **isRedaction** is used, Prohibited otherwise.
Cardinality	One
Representation Element	Text
Value	UTF-8 encoded text
Reference	-
Comments	If a redacted version of the resource exists (as specified by the **isRedactionOf** element) the reason for the redaction of the content should be documented.
Not to be confused with	-

3.2.13.13. isReferencedBy

Layer: Common; Group: Relation; Element: isReferencedBy	
Description	The described resource is referenced, cited or otherwise pointed to by the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**references** - this is the inverse of **isReferencedBy.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.14. isRequiredBy

Layer: Common; Group: Relation; Element: isRequiredBy	
Description	The described resource is required by the referenced resource to support its function, delivery or coherence of content.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**requires** - this is the inverse of **isRequiredBy.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.15. isReplacedBy

Layer: Common; Group: Relation; Element: isReplacedBy	
Description	The described resource is supplanted, displaced or superseded by the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**replaces** - this is the inverse of **isReplacedBy.** For completeness both relations could be included in the metadata of the two resources

3.2.13.16. isVersionOf

Layer: Common; Group: Relation; Element: isVersionOf	
Description	The described resource is a version edition or adaptation of the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	A change in version implies substantive changes in content rather than differences in format. This includes translations of resources. Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**hasVersion** - this is the inverse of **isVersionOf.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.16. providesDefinitionOf

Layer: Common; Group: Relation; Element: providesDefinitionOf	
Description	The described resource provides an effective working definition of an item whose usual name is given in the value.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**isDefinedBy** - this is the inverse of **providesDefinitionOf.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.17. references

Layer: Common; Group: Relation; Element: references	
Description	The described resource references, cites or otherwise points to the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**isReferencedBy** - this is the inverse of **references.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.18. replaces

Layer: Common; Group: Relation; Element: replaces	
Description	The described resource supplants, displaces or supersedes the referenced resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**isReplacedBy** - this is the inverse of **replaces.** For completeness both relations could be included in the metadata of the two resources.

3.2.13.19 requires

Layer: Common; Group: Relation; Element: requires	
Description	The described resource requires the referenced resource to support its function, delivery or coherence of content.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**isRequiredBy** - this is the inverse of **requires.** For completeness both relations could be included in the metadata of the two resources.

3.2.14. Rights Group

Layer: Common; Group: Rights	
Description	The Rights group provides metadata elements to capture information about rights held in and over a resource.
Reference	-
Comments	The elements in the Rights group are used to provide more detailed information about the rights associated with a resource. If this information is absent, no assumptions should be made about the status of specific rights with respect to the resource. While copyright is considered a type of intellectual property right, in this instance copyright will stand alone, and intellectual property right will be used to indicate all other intellectual rights other than copyrights. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. For NATO owned resources, the rights are typically held by the North Atlantic Treaty Organisation. If in doubt, the legal advisor should be consulted.
Elements	**accessRights** **copyright** **license** **rights** **rightsHolder**

3.2.14.1. accessRights

Layer: Common; Group: Rights; Element: accessRights	
Description	Information about who can access the resource or an indication of its legal accessibility, security status.
Obligation	Optional
Cardinality	Many
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	Access rights may include information regarding access or restrictions based on privacy, copyright, security, or other policies. Access decisions have to be made based on the confidentiality label of the resource.
Not to be confused with	-

3.2.14.2. copyright

Layer: Common; Group: Rights; Element: copyright	
Description	Indicator whether a particular resource is copyrighted
Obligation	Optional
Cardinality	One
Representation Term	Indicator
Value	Boolean [true | false]
Reference	-
Comments	For resources that are copyrighted by the **rightsHolder** the **copyright** element should be set to 'yes'. The full copyright statement can be supplied via the **rights** element. The **copyright** element makes it easy to filter for resources that are copyrighted and facilitates IPR management. There is no default value for this element.
Not to be confused with	**dateCopyrighted** – specifies the date on which a resources was copyrighted, not whether a copyright exists.

3.2.14.3. license

Layer: Common; Group: Rights; Element: license	
Description	A legal document giving official permission to do something with the resource.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	Being aware of Intellectual Property Right (IPR) issues, it may be necessary to capture the license agreement underlying the use of a particular (external) resource. Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal sources this may be the identifier if a single, consistent identification schema is used; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external sources.
Not to be confused with	**authorizedBy** – the license is a document that regulates the use of the resource. The authorization includes other aspects such as the creation and captures the reason why the reason exists in the first place.

3.2.14.4. rights

Layer: Common; Group: Rights; Element: rights	
Description	Information about rights held in and over a resource.
Obligation	Optional
Cardinality	Many
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	Typically, a **rights** element will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. For NATO owned resources, the rights are typically held by the North Atlantic Treaty Organisation. If in doubt, the legal advisor should be consulted.
Not to be confused with	**rightsHolder** – the **rightsHolder** is the entity that actually holds the mentioned rights in and over a resource; **rights** is being used to express the particular rights.

3.2.14.5. rightsHolder

Layer: Common; Group: Rights; Element: rightsHolder	
Description	A person or organization owning or managing rights over the resource.
Obligation	Optional
Cardinality	One
Representation Term	PointOfContact
Value	Point of Contact (as UTF-8 encoded text)
Reference	AC/322-N(2013)0134 – Definition of the NATO Enterprise for the delivery of C3 Capabilities and Information and Communications Technology Services
Comments	For rights holders within NATO, the value should come from an approved list of organizational elements (or just be 'NATO' as a default). No individual staff member would be a rights holder. The value for this element shall use the six components defined for Point of Contact information – type, name, affiliation, address, email, phone – separated by a semicolon (;). Of these components only type and name are mandatory. Note that in the NATO Information Management context the Originator and Information Owner roles are filled by the same entity. For ownership information about the resource the **rightsHolder** element should be used, while **publisher** is used for the entity that makes the resource available.
Not to be confused with	**publisher** - The **publisher** is the organizational element that makes the resource available. This might or might not imply ownership of specific rights. **rights** - **rights** is being used to express the particular rights; **rightsHolder** is the entity that actually holds the mentioned rights in and over a resource;

3.2.15. source

Layer: Common; Element: source	
Description	Reference to a resource from which the present resource is derived.
Obligation	Optional
Cardinality	Many
Representation Term	Identifier
Value	URI **identifier**
Reference	http://www.ietf.org/rfc/rfc3986.txt
Comments	The described resource may be derived from the related resource in whole or in part. The value of this element specifies the identifier of the underlying resources. Additional textual information about the origin of the resource might be provided through the **provenance** element. Recommended best practice is to identify the related resource by means of a string conforming to a formal identification system. For internal resources this might be the identifier; for external resources this could be a URI. Ideally, URIs would be used for both, internal and external resources.
Not to be confused with	**relation** - Do not use **source** if it is more appropriate to put this data in the relation element, i.e. it may be more accurate to use the element **isVersionOf**. **provenance** – Textual information about the origin of the resource can be provided by including **provenance** information

3.2.16. Subject Group

Layer: Common; Group: Subject	
Description	The Subject group provides metadata elements to capture information about the topic and the content of the resource.
Reference	-
Comments	Use the **subject** element for uncontrolled terms if they will make it easier for people to find the resource. Use the **keyword, contextActivity** and **subjectCategory** elements to select a value from a controlled vocabulary or formal classification scheme.
Elements	**keyword** **subject** **subjectCategory**

3.2.16.1. keyword

Layer: Common; Group: Subject; Element: keyword	
Description	A word or term used to describe, as specific as possible, the subject matter of the resource.
Obligation	Optional
Cardinality	Many
Representation Term	Code
Value	Controlled vocabulary of keywords (as UTF-8 encoded text)
Reference	-
Comments	Keywords should be taken from a controlled vocabulary or organizational taxonomy. For uncontrolled vocabulary items use the less specific **subject** element. Each keyword or term has to be specified separately, i.e. this element does not allow multiple keywords as its value. If a **keyword** consists of multiple words (e.g. Missile Defence), the use of underscores (Missile_Defense) or contractions (e.g. MissileDefense) should be avoided, as these will complicate search.
Not to be confused with	**subject** – uncontrolled vocabulary or terms should be specified using the **subject** term.

3.2.16.2. subject

Layer: Common; Group: Subject; Element: subject	
Description	The topic of the content of the resource.
Obligation	Optional
Cardinality	One
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	Typically, the **subject** will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Use the **subject** term for uncontrolled terms if they will make it easier for people to find the resource. For agreed, controlled terminology use the **keyword** element, for classification codes use **subjectCategory**.
Not to be confused with	**title –** the title of the resource is not necessarily the subject that is described therein **description –** the description is typically a summarization of the contents of the resource **coverage –** the coverage expresses the temporal and/or spatial extent of the resource

3.2.16.3. subjectCategory

Layer: Common; Group: Subject; Element: subjectCategory	
Description	The **subjectCategory** specifies a coded value to categorize the resource along a highly controlled taxonomy or list.
Obligation	Optional
Cardinality	Many
Representation Term	Code
Value	ACP-117 NATO Supplement 2(B) subject indicator code (as UTF-8 encoded text)
Reference	AC/322-D(2007)0033-AS1
Comments	ACP-117 NATO Supplement 2(B) subject indicator codes shall be used to select one or more values for the subject category of the resource. For uncontrolled items use the less specific **subject** element or the **keyword** element.
Not to be confused with	**keyword** – keywords are based on controlled vocabulary. Unlike the values for **subjectCategory**, keywords are always intended to be human-readable. **contextActivity** – the contextActivity is the name of the operation, exercise or education programme, if any, to which a resource pertains.

3.2.17. Title Group

Layer: Common; Group: Title	
Description	The Title group provides metadata elements to capture information about the title of the resource.
Reference	-
Comments	Each resource has exactly one title. Alternative titles under which the resource is known or subtitles shall be captured using the elements **alternative** and **subtitle.**
Elements	**alternativeTitle** **subtitle** **title**

3.2.17.1. alternativeTitle

Layer: Common; Group: Title; Element: alternativeTitle	
Description	Any form of the title used as a substitute or alternative to the formal title of the resource.
Obligation	Optional
Cardinality	Many
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	For an alternative title, add any form of the title used as a substitute or alternative to the formal title of the resource, including a name by which the resource is normally known, abbreviations and translations. Similarly, if the official or formal title of a resource is one which members outside of the Community of Interest would find incomprehensible, it is recommended that an additional, meaningful name be given to it.
Not to be confused with	**subtitle –** A **subtitle** is usually associated with or part of the title of the resource. The **alternative** is a name or abbreviation under which the resource is also known.

3.2.17.2. subtitle

Layer: Common; Group: Title; Element: subtitle	
Description	Any subtitle of a resource that is associated with the formal title (or a part thereof)
Obligation	Optional
Cardinality	Many
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	The subtitle is typically associated with the formal title of the resource. It is not an alternative title but usually a qualification of the formal title. Version information or volume numbers should not be captured as a subtitle. Use **version** for specific version information, and include the volume number as part of the formal title. For example, for "NNEC Feasibility Study Vol. 2: Detailed report covering a strategy and roadmap for realizing an NNEC Networking and Information Infrastructure (NII)" the title of a document should be "NNEC Feasibility Study Vol. 2", the subtitle should be "Detailed report covering a strategy and roadmap for realizing an NNEC Networking and Information Infrastructure (NII)".
Not to be confused with	**alternative**

3.2.17.4. title

Layer: Common; Group: Title; Element: title	
Description	The title is the official name of a resource.
Obligation	Mandatory
Cardinality	One
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	Each resource has exactly one title. The title is typically one of the most known properties of a resource. It enables the user to find a resource by its particular name and is commonly used as one of the main sorting criteria for search results. Typically, title will be a name by which the resource is formally known. If the resource does not have a formal title, then it is recommended to create a meaningful title. The title should be brief and meaningful rather than clever and catchy. If the resource is an e-mail and the subject line is unclear, give a meaningful title as the main title, and use the original subject line as the alternative title. The title should be in the same language as the resource. If the resource is in more than one language, the title should be in the main language(s) of the resource, with alternative titles in other languages. If the resource is an electronic folder containing electronic documents, use the usual folder name as the title.
Not to be confused with	**description** **subject** **subjectCategory**

3.2.18. type

Layer: Common; Element: type	
Description	The nature or genre of the resource.
Obligation	Optional
Cardinality	One
Representation Term	Code
Value	DCMI Type Vocabulary (with NATO approved extensions, as UTF-8 encoded text)
Reference	http://dublincore.org/documents/dcmi-type-vocabulary/
Comments	Recommended best practice is to use a controlled vocabulary such as the DCMI Type Vocabulary. To describe the file format, physical medium, or dimensions of the resource, use the **format** element. NATO approved extensions to the DCMI Type Vocabulary are possible. Each resource shall have only one type.
Not to be confused with	**format** – **format** refers to the physical format of the resource, including the software application used to create, read and edit it; **type** refers to the content of the resource. **subject** – **type** describes what the resource is instead of what it is about.

3.3. INFORMATION LIFECYCLE SUPPORT LAYER

Information Lifecycle Support Layer	
Description	The Information Lifecycle Support layer includes metadata elements that are supporting the management of resources throughout their lifecycle.
Reference	C-M(2008)0113; C-M(2009)0021; AC/324-D(2010)0003; AC/324-D(2012)0003
Comments	Information Management is a common task among all communities. For this reason the additional metadata elements that will be required to support the information lifecycle are included in a separate layer as part of the NCMS instead of a COI extension.

3.3.1. Records Group

Layer: Information Lifecycle Support; Group: Records	
Description	The Records group provides metadata elements to support record management tasks.
Reference	C-M(2011)0043 NATO Records Policy C-M(2009)0021 Policy on Retention and Disposition of NATO Information AC/324-D(2010)0003 Retention and Disposition Directive for NATO Committee Documents AC/324-D(2012)0003 NATO Strategy for Long Term Preservation of Digital Information
Comments	-
Elements	**recordsDisposition** **recordsHold**

3.3.1.1. recordsDisposition

Layer: Information Lifecycle Support; Group: Records; Element: recordsDisposition	
Description	Information about the disposal of a resource.
Obligation	Optional
Cardinality	One
Representation Term	Code
Value	One from the following enumerated list, as UTF-8 encoded text: *Transferred to Custodian* *Transferred to NATO Archives* *Destroyed*
Reference	C-M(2009)0021 Policy on Retention and Disposition of NATO Information AC/324-D(2010)0003 Retention and Disposition Directive for NATO Committee Documents AC/324-D(2012)0003 NATO Strategy for Long Term Preservation of Digital Information
Comments	The element dateDisposition indicates the date that the recordsDisposition was set/updated.
Not to be confused with	-

3.3.1.2. recordsHold

Layer: Information Lifecycle Support; Group: Records; Element: recordsHold	
Description	Indicator for a hold on a resource
Obligation	Optional
Cardinality	One
Representation Term	Indicator
Value	Boolean [true | NO], with 'no' as the default value
Reference	C-M(2009)0021 Policy on Retention and Disposition of NATO Information AC/324-D(2010)0003 Retention and Disposition Directive for NATO Committee Documents AC/324-D(2012)0003 NATO Strategy for Long Term Preservation of Digital Information
Comments	Setting a hold on a resource suspends the normal disposition process. This could be used to prevent the destruction of a resource. The default value for this element shall be 'No'. In this case, and if the element is not specified in the set of metadata associated with the resource, the standard disposition process of organization will be followed.
Not to be confused with	-

3.3.2. status

Layer: Information Lifecycle Support; Element: status	
Description	The current status of a resource.
Obligation	Optional
Cardinality	One
Representation Term	Code
Value	One of the following enumerated list, as UTF-8 encoded text: *active* *semi-active* *inactive*
Reference	C-M(2011)0043 NATO Records Policy
Comments	This element captures the status of a resource according to its use.
Not to be confused with	**version –** the version of the resource is a marking chosen in accordance with a specific versioning scheme. It is not related to the status and may be specified by using the **version** element.

3.3.3. updatingFrequency

Layer: Information Lifecycle Support; Element: updatingFrequency	
Description	The interval (or frequency) of updates to the resource.
Obligation	Optional
Cardinality	One
Representation Term	Code
Value	Based on ISO19115-1 (MD_MaintenanceFrequencyCode, as UTF-8 encoded text)
Reference	ISO 19115-1:2014
Comments	Values for the enumerated list should include: continual - The data resource may be found to have changed each time it is accessed daily - The data is refreshed every 24 hrs weekly - The data is refreshed every 7 days fortnightly - The data is refreshed every 14 days monthly - The data is refreshed 12 times per year quarterly - The data is refreshed 4 times per year biannually - The data is refreshed 2 times per year annually - The data is refreshed once per year asNeeded - The data is refreshed only when the need arises irregular - The data is refreshed, but on an "ad-hoc" basis notPlanned - It is not intended that the data will change in the future unknown - It is not known whether the data will change in the future For a database originally created in 1997 but updated monthly since then **created**:1997-03-28 **updatingFrequency**: monthly
Not to be confused with	-

3.3.4. version

Layer: Information Lifecycle Support; Element: version	
Description	The version of the resource
Obligation	Optional
Cardinality	One
Representation Term	Text
Value	UTF-8 encoded text
Reference	-
Comments	Version information should be expressed by using an agreed upon versioning schema. For documents and software typical versioning schemas are major.minor[.build[.revision]] or major.minor[.maintenance[.build]]. A version 1.0 typically indicates the first public release of a resource. Other versioning schemas used for documents are v[major]d[minor], indicating a version and a draft revision, e.g. v2d3 referring to a version 2, draft revision 3.
Not to be confused with	**hasVersion, isVersionOf –** these elements express relationships between resources, i.e. that resource A is a version of resource B. The relationship is about similarity, provenance, and pedigree. The elements do not capture the actual version information itself.

CHAPTER 4 COI Metadata

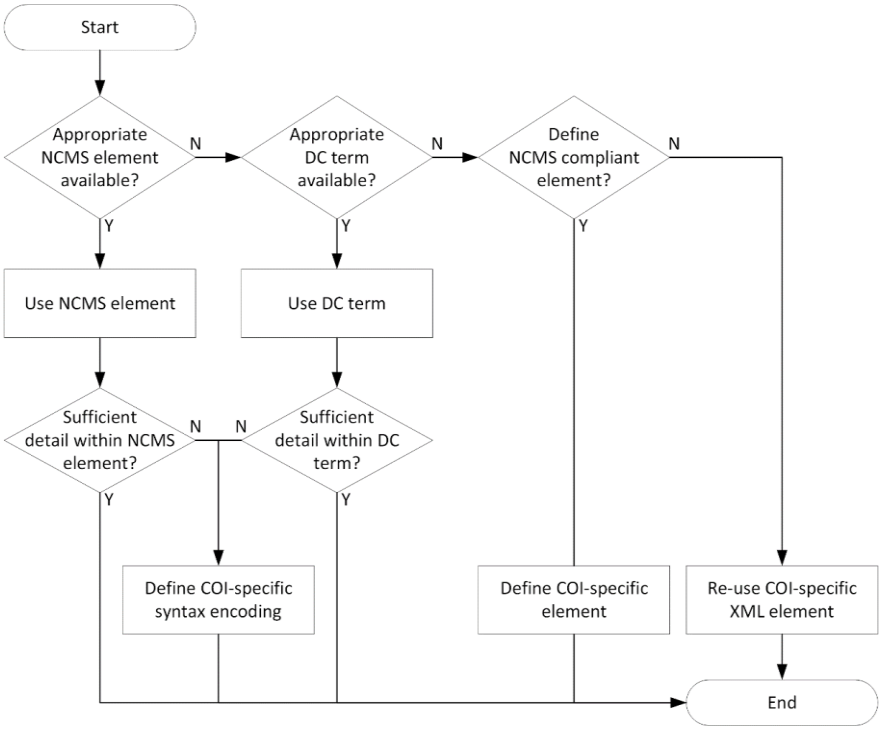
4.1 INTRODUCTION

The NCMS defines a set of common metadata elements that should be used to describe information across domains[4]. It is recognized that this core set may not be sufficient for communities of interest (COIs) that have additional metadata elements that they wish to associate with information objects.

This specification supports the inclusion of additional COI metadata elements alongside the core metadata elements. COIs can therefore augment the core metadata elements with additional elements to support their information exchange requirements.

4.2 DEFINING COI METADATA ELEMENTS

There are a number of considerations to take into account when defining COI metadata that will be used with the core metadata. These are summarized in the flowchart shown below.



The diagram may be summarized as follows:

1. Use existing NCMS metadata elements, with existing syntax encodings – see 4.2.1.

[4] Note that the metadata terms defined in this specification may also be used within NATO and national domains.

2. Use existing Dublin Core metadata terms, with existing syntax encodings – see 4.2.3.
3. Use existing NCMS or DC metadata terms, with COI-specific syntax encodings if the existing syntax encodings are not sufficient for the COI's needs – see 4.2.2.
4. Define COI-specific metadata elements – see 4.2.4.
5. Reuse existing COI-specific XML elements – see 4.2.5.

Note that all new syntax encodings and metadata elements should be compliant with the NCDF XNDR (Reference [17]).

4.2.1 Use NCMS Element

In order to support interoperability, the core metadata elements defined in this SRD should be used in preference to any COI specific equivalents.

For example, if a COI uses a `<coi:creator>` metadata element internally, this should be mapped to a `<s5636:Creator>` metadata element.

4.2.2 Define COI-Specific Syntax Encoding

When there is an existing core metadata element that a COI could use, but it does not contain a sufficient level of detail to support the information exchange requirement of the COI, then a new, COI-specific, syntax encoding SHOULD be defined.

For example, if a COI creator metadata element contains an instant messaging address, then a new syntax encoding could be defined, derived from existing syntax encoding defined in this ADatP:

```
<xs:complexType name="imPOCType">
  <xs:complexContent>
    <xs:extension base="s5636:POCType">
      <!-- We add a jid (Jabber ID) for a XMPP client -->
      <xs:attribute name="jid" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

This new syntax encoding can then be used with a core metadata element:

```
<dcterms:creator xsi:type="coi:imPOC" jid="user@example.com">John Doe
</dcterms:creator>
```

The additional syntax encodings defined by COIs can be put forward for inclusion in future versions of this ADatP.

4.2.3 Use DC Term

This ADatP does not adopt all of the DCMI metadata terms and some of the unadopted metadata terms may be suitable for the COI-specific metadata.

For example, if the COI metadata term provides details of the target audience for the information, then the COI may consider using `<dcterms:audience>` metadata term:

```
<dcterms:audience>Operators</dcterms:audience>
```

The chosen metadata term may be used with the syntax encodings defined in this ADatP (see section 2.4.2), for example:

```
<dcterms:audience xsi:type="s5636:CodeType"
cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/audience
-v1.gc">Operators</dcterms:audience>
```

or with a COI-specific syntax encoding (see section 4.2.2), for example:

```
<dcterms:audience xsi:type="coi:AudienceType">Operators</dcterms:audience>
```

The adopted DCMI metadata terms should be put forward for inclusion in future editions of this ADatP.

4.2.4 Define COI-Specific Element

When there is no existing metadata term defined in this ADatP or the DCMI metadata terms, then a COI may define a new metadata term that is aligned with the approach adopted by this ADatP.

In particular, a new metadata term should be defined as a substitution for the `<dc:any>` term, either directly or via one of the metadata terms defined in this ADatP or via one of the Dublin Core metadata terms.

For example, a COI may maintain an "Acronym" metadata element, which could be defined as:

```
<xs:element name="Acronym" substitutionGroup="s5636:Title"/>
```

and used as

```
<coi:Acronym>NIMP</coi:Acronym>
```

These new metadata terms may be used with the syntax encodings defined in this document (see section 2.4.2), for example:

```
<coi:Acronym xsi:type="s5636:CodeType"
cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/cwix-
acronyms.gc>IPC</coi:Acronym>
```

or with a COI-specific syntax encoding (see section 4.2.2), for example:, a Three Letter Acronym (TLA):

```
<coi:Acronym xsi:type="coi:TLAType">ABC</coi:Acronym>
```

The adopted COI-specific metadata terms should be put forward for inclusion in future editions of this ADatP, in order to promote their re-use, and prevent their redefinition, in other communities.

4.2.5 Re-use COI-Specific XML Element

COIs may have already defined their own metadata elements which are in widespread use but which are not aligned with the approach adopted by this ADatP. In this case, these elements can be used alongside the NCMS elements within a metadata binding.

CHAPTER 5 REFERENCES

[1] STANAG 4774, Confidentiality Metadata Label Syntax, Brussels, Belgium, December 2017

[2] STANAG 4778, Metadata Binding Mechanism, Brussels, Belgium

[3] NATO Core Metadata Specification (NCMS), AC/322-D(2014)0010, 14 January 2014.

[4] DCMI DCSV: A syntax for representing simple structured data in a text string, http://dublincore.org/documents/dcmi-dcsv/, 10th April 2006.

[5] DCMI Box Encoding Scheme specification of the spatial limits of a place, and methods for encoding this in a text string, http://dublincore.org/documents/dcmi-box/, 10th April 2006.

[6] DCMI Period Encoding Scheme: specification of the limits of a time interval, and methods for encoding this in a text string, http://dublincore.org/documents/dcmi-period/, 10th April 2006

[7] DCMI Point Encoding Schema: a point location in space, and methods for encoding this in a text string, http://dublincore.org/documents/dcmi-point/, 10th April 2006

[8] DCMI Metadata Terms, http://dublincore.org/documents/dcmi-terms/, 14th June 2012

[9] Guidelines for implementing Dublin Core in XML, http://dublincore.org/documents/2003/04/02/dc-xml-guidelines/, 2nd April 2003.

[10] XML Schemas to support the Guidelines for implementing Dublin Core in XML, http://dublincore.org/schemas/xmls/.

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[13] OASIS Code List Representation (Genericode) Version 1.0, http://docs.oasis-open.org/codelist/cs-genericode-1.0/doc/oasis-code-list-representation-genericode.pdf, 28 December 2007

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[15] NATO Interoperability Standards and Profiles (NISP), Version 11, ADatP-34(K).

[16] (Draft) NATO Core Data Framework Code Lists Specification Version 0.1.

[17] (Draft) NATO Core Data Framework (NCDF) XML Naming and Design Rules (XNDR) v0.4

[18] Consultation, Command and Control Board (2013), Definition of the NATO Enterprise for the Delivery of C3 Capabilities and Information and Communications Technology Services, AC/322-N(2013)0134, NATO Unclassified.

[19] Quantities, Units, Dimensions and Types, QUDT, http://qudt.org/
[20] International Organization for Standardization (2014), Geographic information Metadata – Part 1: Fundamentals, ISO 19115-1:2014.
[21] Dublin Core Metadata Initiative (DCMS) Type Vocabulary, http://www.dublincore.org/specifications/dublin-core/dcmi-type-vocabulary/
[22] NATO CIS Services Agency Naming and Registration Section (2007), NATO Subject Indicator System (NASIS), ACP 117 NATO Supp-2(B), NATO Unclassified.
[23] Archives Committee (2010), Retention and Disposition Directive for NATO Committee Documents, AC/324-D(2010)0003, NATO Unclassified

CHAPTER 6 ABBREVIATIONS

BDO	Binding Data Object
COI	Community of Interest
CT	Conformance Targets
DC	Dublin Core
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
NCDF	NATO Core Data Framework
NCMS	NATO Core Metadata Specification
NISP	NATO Interoperability Standards and Profiles
NSO	NATO Standards Organization
UTM	Universal Transverse Mercator
XML	eXtensible Markup Language
XNDR	XML Naming and Design Rules

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ANNEX A ELEMENTS BY OBLIGATION

A.1. MANDATORY ELEMENTS

Layer	Group	Element
Security	-	metadataConfidentialityLabel
	-	originatorConfidentialityLabel
Common	-	Creator
	Date	dateCreated
	Identifier	Identifier
	-	Publisher
	Title	Title
Information Lifecycle Support	-	-

A.2. OPTIONAL ELEMENTS

Layer	Group	Element
Security		alternativeConfidentialityLabel
Common	-	Contributor
	Coverage	countryCode
		geographicReference
		placeName
		region
		timePeriod
	-	custodian
	Date	dateAccepted
		dateAcquired
		dateAvailable
		dateClosed
		dateCutOff
		dateDeclared
		dateDisposition
		dateIssued
		dateModified
		dateNextVersionDue
		dateSubmitted
		dateValid
	Description	abstract
		description
		tabelOfContents

Layer	Group	Element
	Format	extent
		mediaFormat
		medium
	Identifier	identifier
		externalIdentifier
	-	language
		contextActivity
		provenance
	Relation	authorizes
		conformsTo
		hasFormat
		hasPart
		hasVersion
		isAuthorizedBy
		isDefinedBy
		isFormatOf
		isPartOf
		isRedactionOf
		isReferencedBy
		isRequiredBy
		isReplacedBy
		isVersionOf
		providesDefinitionOf
		references
		replaces
		requires
	Rights	accessRights
		copyright
		license
		rights
		rightsHolder
	-	source
	Subject	subject
		keyword
		subjectCategory
	Title	alternativeTitle
		subtitle
	-	type
Information Lifecycle Support	Records	recodsDisposition
		recordsHold
	-	updatingFrequency
		version
		status

A.3. CONDITIONAL ELEMENTS

Layer	Group	Element	Condition
Security	-	-	
Common	Coverage	geographicEncodingScheme	Mandatory if **geographicReference** is used, Prohibited otherwise.
	Date	dateCopyrighted	Optional if **copyright** is used, Prohibited otherwise.
	Format	extentQualifier	Mandatory if **extent** is used, Prohibited otherwise.
	Relation	reasonForRedaction	Optional if **isRedaction** is used, Prohibited otherwise.
Information Lifecycle Support	-	-	

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ANNEX B REPRESENTATION OF COMPOSITE VALUES

B.1. CONFIDENTIALITY LABEL

Confidentiality labels are based upon the concepts and elements described in STANAG 4774 – Confidentiality Metadata Label Syntax Reference [1].

B.2. POINT OF CONTACT

Point of Contact information is based on the following subelements:

PointOfContact subelement	Representation Type	Values	Obligation	Cardinality
type	Code	Enumerated list: person, organization, service	Mandatory	One

PointOfContact subelement	Representation Type	Values	Obligation	Cardinality
name	Name	For *person* or *service*: POC name For *organization*: Organizational element based on agreed taxonomy	Mandatory	One

PointOfContact subelement	**Representation Type**	**Values**	**Obligation**	**Cardinality**
affiliation	Name	For *person* or *service*: Organizational element associated with POC, based on organization taxonomy For *organization*: Organization subelement, if applicable, based on organization taxonomy	Conditional: Prohibited if **type** is *service*, Optional otherwise.	One
address	Text	Address or internal routing	Conditional: Prohibited if **type** is *service*, Optional otherwise.	One
email	Text	Email address	Conditional: Prohibited if **type** is *service*, Optional otherwise.	One
phone	Text	Phone number	Conditional: Prohibited if **type** is *service*, Optional otherwise.	One

B.3. TIME INTERVAL

Time intervals are based on the DCMI Period representation and contain the following four subelements:

TimeInterval subelement	Representation Type	Values	Obligation	Cardinality
start	DateTime	Start date/time of the interval	Optional	One
end	DateTime	End date/time of the interval	Optional	One
name	Name	Name of the interval, if applicable	Optional	One
scheme	Identifier	Encoding schema of start and end data. Shall be ISO 8601, as required by DateTime	Optional	One

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ANNEX C NATO CORE METADATA SPECIFICATION XML SCHEMA

C.1 INTRODUCTION

This Annex builds upon the DCMI Metadata Elements (Reference [8]), and its associated XML schemas (Reference [10]), for NCMS metadata elements. This adoption of existing, standardised metadata elements, promotes the interoperability and adoption of the NCMS metadata elements.

This Annex defines XML elements, and syntax encodings for NCMS metadata elements, derived from DCMI Metadata Elements where possible, following the same guidelines (Reference [9]) that were used for developing the DCI Metadata Elements XML schema.

The complete XML Schema is provided in Appendix 1.

C.2 XML NAMESPACES AND PREFIXES

The following namespaces and associated prefixes are used within the NCMS XML Schema:

Prefix	Namespace	Note
xml	http://www.w3.org/XML/1998/namespace	
xs	http://www.w3.org/2001/XMLSchema	
xsi	http://www.w3.org/2001/XMLSchema-instance	
dc	http://purl.org/dc/elements/1.1/	
dcterms	http://purl.org/dc/terms/	
dcmitype	http://purl.org/dc/dcmitype/	

Prefix	Namespace	Note
s4774	urn:nato:stanag:4774:confidentialitymetadatalabel:1:0	The prefix ‘slab’ is used for this namespace in the examples shown in ADatP- 4774 and ADatP-4778.
s4778	urn:nato:stanag:4778:bindinginformation:1:0	The prefixes ‘mb’ is used for this namespace in the examples shown ADatP-4778.
s5636	urn:nato:stanag:5636:A:1:elements	

C.3 REPRESENTATION OF VALUES

For each NCMS metadata element, this implementation guidance lists its representation term as well as the allowed values. Representation terms semantically represent the data type of metadata element and can be seen as a cataloguing based on the type of information captured by the element.

The following table identifies the representation terms are used by the NCMS metadata elements, together with a reference to where the syntax encoding is defined.

Representation Term	Semantics	XML Syntax Encoding	Reference
Code	Code-based enumerated list	s5636:CodeType	§C.3.1.4
ConfidentialityLabel	Confidentiality label, composite, based on NATO Labelling Specification	s4774:ConfidentialityLabelType	[1]
DateTime	Date and time based on ISO 8601	s5636:W3CDTFType	§C.3.1.7
GeoReference	Geographic reference	dcterms:Point dcterms:Box s5636:UTMType	[7] [5] §C.3.1.3
Identifier	Unique identifier to resource in the form of a URI or organizational identifier	dcterms:URI	[12]
Indicator	Boolean, exactly two mutual exclusive values	s5636:BoolType	§C.3.1.5
Name	Name, label or token referring to an object. The name does not need to be unique.	s5636:SimpleLiteralType	§C.3.1.6
PointOfContact	Point of contact information, composite	s5636:POCType	§C.3.1.1
Quantity	Numeric quantity	s5636:ExtentType	§C.3.1.2
Text	Text as string of characters	s5636:SimpleLiteralType	§C.3.1.6
TimeInterval	Time interval, composite, based on DCMI Period.	dcterms:Period	[6]

C.3.1 Syntax Encodings

The NCMS define a number syntax encodings that are used by some of the core metadata elements, and may also be used by COI metadata elements.

The syntax encodings are shown in the following, table, together with a reference to a description of the encoding.

Syntax Encoding	Reference
s5636:POCType	§C.3.1.1
s5636:ExtentType	§C.3.1.2
s5636:UTMType	§C.3.1.3
s5636:CodeType	§C.3.1.4
s5636:BoolType	§C.3.1.5
s5636:SimpleLiteralType	§C.3.1.6
s5636:W3CDTFType	§C.3.1.6

C.3.1.1 Point Of Contact

Point of Contact information contains the following sub elements:

PointOfContact sub element	Representation Type	Values
Type	Name	The type of the POC. The type may be used to constrain the value domain on the other sub elements.
Name	Name	A personal name or an organizational element based on agreed taxonomy
Affiliation	Name	An organizational element associated with POC, based on an organization taxonomy
Address	Text	Address or internal routing
Email	Text	Email address
Phone	Text	Telephone number

The PointOfContact syntax encoding, s5636:POCType, is an extension of the s5636:SimpleLiteralType syntax encoding, with the content containing the *name* sub element, and the other sub elements being specified as attributes. For example,

```
<s5636:Contributor type=”person” email=”joe.x.user@hq.nato.int”>Joe X. User
</s5636:Contributor>
```

In addition, where the POC value is drawn from a CodeList, this may be indicated by the following sub-elements:

- codeListURI – an optional attribute that specifies the universal identifier for a code list from which the value is drawn
- codeListColumnName – an optional attribute that specifies a column within the specified code list from which the code list value is drawn. Default is "#code".
- codeListConstrainingIndicator – an optional attribute which indicates whether the code list binding constrains the validity of the code list value (i.e. whether the code list value must be contained within the identified code list). Default is "True".

These attributes are specified in the (proposed[5]) NATO Core Data Framework Code Lists Specification (Reference [16]).

For example,

```
<s5636:Publisher type=”organization”
cli:codeListURI=”https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/Profiles/NATO/1.0/CodeLis
ts/entity-v1.gc”>Joint Warfare Centre, Stavanger, Norway</s5636:Publisher>
```

C.3.1.2. Extent

The Extent syntax encoding, s5636:ExtentType, is an extension of the s5636:SimpleLiteralType syntax encoding, with an additional 'qualifier' attribute to qualify the extent that is being indicated. For example,

```
<s5636:Extent s5636:qualifier="km">17389</s5636:Extent>
```

The set of qualifiers is unconstrained.

C3.1.3. UTM

[5] If the NCDF Code Lists Specification has not been published by the time of the final ratification draft, the equivalent definitions will be incorporated directly into this specification.

The UTM syntax encoding scheme, s5636:UTMType, is used to indicate that the value conforms to the Universal Transverse Mercator coordinate system. The syntax encoding is a restriction of the s5636:SimpleLiteralType syntax which prohibits the use of the lang attribute. For example,

```
<s5636:GeographicReference xsi:type=”s5636:UTMType”>31U 590738 5774039
</s5636:GeographicReference>
```

C3.1.4. Code

The Code syntax encoding scheme, s5636:CodeType, is used to indicate a value that has been selected from a specific vocabulary or ontology. The s5636:SimpleLiteralType syntax is extended with an additional attributes to indicate the value domain from which the value is drawn. These attributes are:

- codeListURI – a mandatory attribute that specifies the universal identifier for a code list.
- codeListColumnName – an optional attribute that specifies a column within the specified code list from which the code list value is drawn. Default is "#code".
- codeListConstrainingIndicator – an optional attribute which indicates whether the code list binding constrains the validity of the code list value (i.e. whether the code list value must be contained within the identified code list). Default is "True".

These attributes are specified in the (proposed[6]) NATO Core Data Framework Code Lists Specification (Reference [16]).
For example,

```
<s5636:CountryCode cli:codeListURI=”countryCode-v1.gc”
  cli:codeListColumnName="code">AFG</s5636:CountryCode>
```

As the values are held within an external vocabulary, the code value will not be validated during schema validation. However, the values can be validated using other mechanisms, for example Schematron rules.

[6] If the NCDF Code Lists Specification has not been published by the time of the final ratification draft, the equivalent definitions will be incorporated directly into this specification.

C3.1.5 Bool

The Bool syntax encoding scheme, s5636:BoolType, is a restriction of the s5636:SimpleLiteralType syntax, which restricts the value domain to the XML Boolean values, and prohibits the use of the lang attribute. For example,

```
<s5636:Copyright>true</s5636:Copyright>
```

C3.1.56 SimpleLiteral

The SimpleLiteral syntax encoding schema, s5636:SimpleLiteralType is an extension of the dc:SimpleLiteral type to allow the use an of xml:id attribute. This allows metadata of the type s5636:SimpleLiteralType to be referenced using XPointer, for example, within a STANAG 4778 BindingInformation. For example:

```
<s5636:Title xml:id=”title”>The Title</s5636:Title>
```

may be referenced as:

```
<s4778:MetadataReference URI=”#title”/>
```

C3.1.7 W3CDTF

The W3CDTF syntax encodinfg schema, s5636:W3cDTFType is an extension of the dcterms:W3CDTF type to allow the use an of xml:id attribute. This allows metadata of the type s5636:W3CDTFType to be referenced using XPointer, for example, within a STANAG 4778 BindingInformation. For example:

```
<s5636:DateAccepted xml:id=”dateAccepted”>1999-01-22</s5636:DateAccepted>
```

may be referenced as:

```
<s4778:MetadataReference URI=”#dateAccepted”/>
```

C.4. REPRESENTATION OF METADATA

C.4.1. Security Layer

C.4.1.1. alternativeConfidentialityLabel

Layer: Security; Element: alternativeConfidentialityLabel	
Description	An additional alternative confidentiality label assigned to the resource
XML Element	s4774:alternativeConfidentialityLabel
Syntax Encoding	s4774:ConfidentialityLabelType

Examples	`<s4774:alternativeConfidentialityLabel>`
	`  <s4774:ConfidentialityInformation>`
	`  <s4774:PolicyIdentifier>ACME</s4774:PolicyIdentifier>`
	`  <s4774:Classification>YELLOW</s4774:Classification>`
	`  <s4774:Category TagName=”RelasableTo” Type=”PERMISSIVE”>`
	`  <s4774:GenericValue>EU</s4774:GenericValue>`
	`  </s4774:Category>`
	`  </s4774:ConfidentialityInformation>`
	`  <s4774:CreationDateTime>2018-03-15T14:12:00</s4774:CreationDateTime>`
	`</s4774:alternativeConfidentialityLabel>`

C.4.1.2. metadataConfidentialityLabel

There is no explicit XML Element defined for the metadataConfidentialityLabel.

The metadataConfidentialityLabel is implemented by the binding of an originatorConfidentialityLabel XML Element to the metadata.

This approach makes use of the NATO standard for binding metadata to data objects and also provides a general approach that can support the granular labelling of metadata, and the binding of additional metadata (e.g. creator) to the metadata.

Further details of this binding of metadata to metadata is provided in Appendix 2. [7]

[7] See AdatP-4778.SRD.2 for more detail.

C.4.1.3 originatorConfidentialityLabel

Layer: Security; Element: originatorConfidentialityLabel	
Description	The confidentiality label assigned to the resource by the originator
XML Element	s4774:originatorConfidentialityLabel
Syntax Encoding	s4774:ConfidentialityLabelType

Examples	`<s4774:originatorConfidentialityLabel >`
	`<s4774:ConfidentialityInformation>`
	`<s4774:PolicyIdentifier>NATO</s4774:PolicyIdentifier>`
	`<s4774:Classification>RESTRICTED</s4774:Classification>`
	`<s4774:Category Type="PERMISSIVE" TagName="Context">`
	`<s4774:GenericValue>NATO</s4774:GenericValue>`
	`</s4774:Category>`
	`</s4774:ConfidentialityInformation>`
	`<s4774:CreationDateTime>2013-03-15T14:12:00</s4774:CreationDateTime>`
	`</s4774:originatorConfidentialityLabel>`

C.4.2. Common Layer

C4.2.1. contributor

Layer: Common; Element: contributor	
Description	An entity responsible for making contributions to the content of the resource.
XML Element	s5636:Contributor
Syntax Encoding:	s5636:POCType

Examples	`<s5636:Contributor type=”person”>Joe X. User</s5636:Contributor>`
	
	`<s5636:Contributor type=”person” email=”joe.x.user@hq.nato.int”>`
	`Joe X. User</s5636:Contributor>`

C.4.2.2 countryCode

Layer: Common; Group: Coverage; Element: countryCode	
Description	A standards-based abbreviation of a country name.
XML Element	s5636:CountryCode
Syntax Encoding	s5636:CodeType

Examples	`<s5636:CountryCode cli:codeListURI="`
	`https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/countryCode-v1.gc">`
	`AFG</s5636:CountryCode>`

C.4.2.3. geographicReference

Layer: Common; Group: Coverage; Element: geographicReference	
Description	A geographic reference specified using a particular encoding scheme.
XML Element	s5636:GeographicReference
Syntax Encoding	s5636:UTMType dcterms:Point dcterms:Box
Examples	For a geographic reference to a UTM coordinate: <s5636:GeographicReference xsi:type="s5636:UTMType">31U 590738 5774039</s5636:GeographicReference> For a geographic reference using the DCMI Point format: <s5636:GeographicReference xsi:type="dcterms:Point">east=590738; north=5774039; projection=UTM zone 31U</s5636:GeographicReference>

C.4.2.4. geographicEncodingScheme

There is no explicit XML Element defined for the geographicEncodingScheme.

The geographicEncodingScheme is specified using the xsi:type of the geographicReference XML Element.

C.4.2.5. placeName

Layer: Common; Group: Coverage; Element: placeName	
Description	The name of a place of interest, other than a country or region.
XML Element	s5636:PlaceName
Syntax Encoding	s5636:CodeType
Examples	<s5636:PlaceName cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/region-v1.gc">1.5km north of somewhere</s5636:PlaceName> <s5636:PlaceName cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/region-v1.gc">Green Zone, Baghdad, IRQ</s5636:PlaceName>

C.4.2.6. region

Layer: Common; Group: Coverage; Element: region	
Description	The name of a sub-national or transnational geographic or geopolitical region that is a subject of the resource.
XML Element	s5636:Region
Syntax Encoding	s5636:CodeType
Examples	<s5636:Region cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/region-v1.gc">AF-KDZ</s5636:Region> <s5636:Region cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/region-v1.gc">DE-NI</s5636:Region>

C.4.2.7. timePeriod

Layer: Common; Group: Coverage; Element: timePeriod	
Description	The time period that the content of the resource covers.
XML Element	s5636:TimePeriod
Syntax Encoding	dcterms:Period

Examples	For a resource covering the time since 15 May 1998 10:30 UTC:
	`<s5636:TimePeriod>start=1998-05-15T10:30</s5636:TimePeriod>`
	For a resource covering the time until 21 March 1969:
	`<s5636:TimePeriod >end=1969-03-21</s5636:TimePeriod>`
	For a resource covering the time of January 2012:
	`<s5636:TimePeriod>start=2012-01-01; end=2012-01-31</s5636:TimePeriod>`
	For a resource covering a particular name interval:
	`<s5636:TimePeriod>start=2006-09-02; end=2006-09-17; name=Operation_Medusa</s5636:TimePeriod>`

C.4.2.8. creator

Layer: Common; Element: creator	
Description	An entity primarily responsible for creating the resource, or the originator of the resource.
XML Element	s5636:Creator
Syntax Encoding	s5636:POCType
Examples	<s5636:Creator s5636:type=”person” s5636:email="jane.z.user@hq.nato.int”> Jane Z. User</s5636:Creator>

C.4.2.9. custodian

Layer: Common; Element: custodian	
Description	The organizational element that currently maintains the resource.
XML Element	s5636:Custodian
Syntax Encoding	s5636:POCType
Examples	`<s5636:Custodian s5636:type="organization">ACO, NATO Communications and Information Systems Group HQ, Mons, Belgium</s5636:Custodian>`

C.4.2.10. dateAccepted

Layer: Common; Group: Date; Element: dateAccepted	
Description	The date on which a resource was accepted (by a department or an organizational element)
XML Element	s5636:DateAccepted
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateAccepted>1999-01-22</s5636:DateAccepted>`

C.4.2.11. dateAcquired

Layer: Common; Group: Date; Element: dateAcquired	
Description	The date on which the resource was received into the organization.
XML Element	s5636:DateAcquired
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateAcquired>2005-05-25</s5636:DateAcquired>`

C.4.2.12. dateAvailable

Layer: Common; Group: Date; Element: dateAvailable	
Description	The date on which a resource became or will become available.
XML Element	s5636:DateAvailable
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateAvailable>2012-04-21</s5636:DateAvailable>`

C.4.2.13. dateClosed

Layer: Common; Group: Date; Element: dateClosed	
Description	The date from which the resource should no longer be referenced or included in a collection of resources..
XML Element	s5636:DateClosed
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateClosed>2013-06-30</s5636:DateClosed>`

C.4.2.14. dateCopyrighted

Layer: Common; Group: date; Element: dateCopyrighted	
Description	The date of a statement of copyright.
XML Element	s5636:DateCopyrighted
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateCopyrighted>1988-02-05</s5636:DateCopyrighted>`

C.4.2.15. dateCreated

Layer: Common; Group: Date; Element: dateCreated	
Description	The date on which the resource was created.
XML Element	s5636:DateCreated
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateCreated>2013-11-06</s5636:DateCreated>`

C.4.2.16. dateCutOff

Layer: Common; Group: Date; Element: dateCutOff	
Description	The date from which on the resource should no longer be added to or modified.
XML Element	s5636:DateCutOff
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateCutOff>2001-05-01</s5636:DateCutOff>`

C.4.2.17. dateDeclared

Layer: Common; Group: Date; Element: dateDeclared	
Description	Date on which the resource was declared, filed or stored.
XML Element	s5636:DateDeclared
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateDeclared>1994-12-31</s5636:DateDeclared>`

C.4.2.18. dateDisposition

Layer: Common; Group: Date; Element: dateDisposition	
Description	The disposition date of the resource, i.e. the date when the resource will be archived or destroyed.
XML Element	s5636:DateDisposition
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateDisposition>2015-12-31</s5636:DateDisposition>`

C.4.2.19. dateIssued

Layer: Common; Group: Date; Element: dateIssued	
Description	The date of formal issuance or publication of the resource.
XML Element	s5636:DateIssued
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateIssued>2013-11-19</s5636:DateIssued>`

C.4.2.20. dateModified

Layer: Common; Group: Date; Element: dateModified	
Description	The date on which the resource was changed.
XML Element	s5636:DateModified
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateModified>2013-12-06</s5636:DateModified>`

C.4.2.21. dateNextVersionDue

Layer: Common; Group: Date; Element: dateNextVersionDue	
Description	The date on which the resource is due to be superseded.
XML Element	s5636:DateNextVersionDue
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateNextVersionDue>2014-01-31</s5636:DateNextVersionDue>`

C.4.2.22. dateSubmitted

Layer: Common; Group: Date; Element: dateSubmitted	
Description	The date on which a resource was submitted.
XML Element	s5636:DateSubmitted
Syntax Encoding	s5636:W3CDTFType
Examples	`<s5636:DateSubmitted>2009-09-30<s5636:DateSubmitted>`

C.4.2.23. dateValid

Layer: Common; Group: Date; Element: dateValid	
Description	The date of validity of a resource.
XML Element	s5636:DateValid
Syntax Encoding	dcterms:Period
Examples	For a resource valid since 15 May 1998 10:30 UTC: <s5636:DateValid>start=1998-05-15T10:30</ s5636:DateValid > For a resource valid until 21 March 1969: < s5636:DateValid>end=1969-03-21</ s5636:DateValid > For a resource valid throughout January 2012: <s5636:DateValid >start=2012-01-01; end=2012-01-31</ s5636:DateValid > For a resource valid during a name interval: < s5636:DateValid>start=2006-09-02; end=2006-09-17; name="Operation Medusa" </s5636:DateValid >

C.4.2.24. abstract

Layer: Common; Group: Description; Element: abstract	
Description	The abstract is a summary of the content of the resource.
XML Element	s5636:Abstract
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:Abstract>Based on the NNEC Feasibility Study [NNEC FS, 2005], this document provides an analysis of ...</s5636:Abstract>`

C.4.2.26. tableOfContents

Layer: Common; Group: Description; Element: tableOfContents	
Description	The table of contents is a formatted outline of the structure of resource, typically listing the sub-units (chapters, sections) of the source.
XML Element	s5636:TableOfContents
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:TableOfContents> Abstract; Summary; 1 Introduction; 1.1 Background; 1.2 Purpose; 1.3 Audience; 1.4 Document Structure; 2 Analysis ...</s5636:TableOfContents>`

C.4.2.27. extent

Layer: Common; Group: Format; Element: extent	
Description	The size or duration of the resource.
XML Element	s5636:Extent
Syntax Encoding	s5636:ExtentType
Examples	`<s5636:Extent s5636:qualifier="m">14 km</s5636:Extent>` `<s5636:Extent s5636:qualifier="km">17389</s5636:Extent>`

C.4.2.28. extentQualifier

There is no explicit XML Element defined for the extentQualifier.

The extentQualifier is specified using the qualifier attribute of the extent XML Element.

C.4.2.29. mediaFormat

Layer: Common; Group: Format; Element: mediaFormat	
Description	The format of the media used for the resource
XML Element	s5636:MediaFormat
Syntax Encoding	s5636:CodeType
Examples	<s5636:MediaFormat cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/mediaTypes-v2016-07-26.gc">image/gif</s5636:MediaFormat>

C.4.2.30. medium

Layer: Common; Group: Format; Element: medium	
Description	The physical medium or instantiation of the resource
XML Element	s5636:Medium
Syntax Encoding	s5636:CodeType
Examples	<s5636:Medium cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/medium-v1.gc">dvd+r</s5636:Medium>

C.4.2.31. identifier

Layer: Common; Group: Identifier; Element: identifier	
Description	An unambiguous reference to the resource within a given context.
XML Element	s5636:Identifier
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	`<s5636:Identifier>AC/322-D(2006)0007-REV1-FINAL1</s5636:Identifier>`

C.4.2.32. externalIdentifier

Layer: Common; Group: Identifier; Element: externalIdentifier	
Description	An external reference to the resource associated with the resource.
XML Element	s5636:ExternalIdentifier
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	`<s5636:ExternalIdentifier>E0609-AT1</s5636:ExternalIdentifier>`

C.4.2.33. language

Layer: Common; Element: language	
Description	The language(s) of the content of the resource.
XML Element	s5636:Language
Syntax Encoding	CodeType
Examples	<s5636:Language cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/Profiles/NATO/1.0/CodeLists/languages-v1.gc">eng</s5636:Language>

C.4.2.34. contextActivity

Layer: Common; Element: contextActivity	
Description	The contextActivity is the name of the operation, exercise or education programme, if any, to which a resource pertains.
XML Element	s5636: ContextActivity
Syntax Encoding	s5656:CodeType
Examples	<s5636:ContextActivity cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/activity-v1.gc">ALTHEA</s5636: ContextActivity> <s5636:ContextActivity cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/activity-v1.gc">RAMSTEIN DUST II 18</s5636:ContextActivity> <s5636:ContextActivity cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/Profiles/NATO/1.0/CodeLists/activity-v1.gc">Sea Guardian</s5636:ContextActivity> <s5636:ContextActivity cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/activity-v1.gc">KFOR KLT II 18</s5636:ContextActivity>

C.4.2.35. provenance

Layer: Common; Element: provenance	
Description	A statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity and interpretation. The statement may include a description of any changes successive custodians made to the resource.
XML Element	s5636:Provenance
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:Provenance>This document was created by NDAG and has previously been maintained by DMSWG.</s5636:Provenance>`

C.4.2.36. publisher

Layer: Common; Element: publisher	
Description	The entity responsible for making the resource officially available.
XML Element	s5636:Publisher
Syntax Encoding	s5636:POCType
Examples	<s5636:Publisher s5636:type="organization">NATO HQ, International Military Staff, Brussels, Belgium</s5636:Publisher>

C.4.2.37. authorizes

Layer: Common; Group: Relation; Element: authorizes	
Description	The resource provides an authorization for another resource.
XML Element	s5636:Authorizes
Syntax Encoding	s5656:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:Authorizes xsi:type="dcterms:URI">http://some.host.nato.int/some/other/resource.docx</s5636: Authorises> <s5636:Authorizes>AC322(CP1)WP(2014)0001</s5636:Authorizes>

C.4.2.38. conformsTo

Layer: Common; Group: Relation; Element: conformsTo	
Description	A reference to an established standard to which the resource conforms.
XML Element	s5636:ConformsTo
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:ConformsTo xsi:type="dcterms:URI">http://some.host.nato.int/some/repository/C-M(2007)0118.pdf</s5636:ConformsTo> <s5636:ConformsTo>C-M(2007)0118</s5636:ConformsTo>

C.4.2.39. hasFormat

Layer: Common; Group: Relation; Element: hasFormat	
Description	The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format.
XML Element	s5636:HasFormat
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:HasFormat xsi:type="dcterms:URI"> http://some.repository/documents/res03421.pdf</s5636:HasFormat> <s5636:HasFormat>ResourceID_03421</s5636:HasFormat>

C.4.2.40. hasPart

Layer: Common; Group: Relation; Element: hasPart	
Description	The described resource includes the referenced resource either physically or logically.
XML Element	s5636:HasPart
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:HasPart xsi:type=”dcterms:URI”>http://some.repository/documents/this_document_part1.pdf</s5636:HasPart> <s5636:HasPart >DMS_002143</s5636:HasPart>

C.4.2.41. hasRedaction

Layer: Common; Group: Relation; Element: hasRedaction	
Description	The described resource has a redacted version, namely the referenced resource.
XML Element	s5636:HasRedaction
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:HasRedaction xsi:type=”dcterms:URI”>http://some.repository/documents/doc_0564_redacted.pdf</s5636:HasRedaction> <s5636:HasReaction>DMS_002143(NU)</s5636:HasRedaction>

C.4.2.42. hasVersion

Layer: Common; Group: Relation; Element: hasVersion	
Description	The described resource has a version edition or adaptation, namely the referenced resource.
XML Element	s5636:HasVersion
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	`<s5636:HasVersion xsi:type=”dcterms:URI”>http://some.repository/documents/ncms_v0d1.pdf</s5636:HasVersion>` `<s5636:HasVersion>DMS_002143</s5636:HasVersion>`

C.4.2.43. isAuthorizedBy

Layer: Common; Group: Relation; Element: isAuthorizedBy	
Description	The resource that provides an authorization for this resource.
XML Element	s5636:IsAuthorisedBy
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:IsAuthorisedBy xsi:type=”dcterms:URI”> http://some.host.nato.int/projects/2013/project543/mandate543.docx </s5636:IsAuthorisedBy> <s5636:IsAuthorisedBy>DMS_005678</s5636:IsAuthorisedBy>

C.4.2.44. isDefinedBy

Layer: Common; Group: Relation; Element: isDefinedBy	
Description	The described resource is given an effective working definition by the referenced resource.
XML Element	s5636:IsDefinedBy
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:IsDefinedBy xsi:type="dcterms:URI"> http://some/repository/pdim.pdf</s5636:IsDefinedBy> <s5636:IsDefinedBy>C-M(2008)0113</s5636:IsDefinedBy>

C.4.2.45. isFormatOf

Layer: Common; Group: Relation; Element: isFormatOf	
Description	The described resource is the same intellectual content of the referenced resource, but presented in another format.
XML Element	s5636:IsFormatOf
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:IsFormatOf xsi:type="dcterms:URI"> http://some.repository/documents/res03421.docx</s5636:IsFormatOf> <s5636:IsFormatOf>RES_03421</s5636:IsFormatOf>

C.4.2.46. isPartOf

Layer: Common; Group: Relation; Element: isPartOf	
Description	The described resource is a physical or logical part of the referenced resource.
XML Element	s5636:IsPartOf
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:IsPartOf xsi:type="dcterms:URI">http://some.repository/documents/the_complete- _document.pdf</s5636:IsPartOf> <s5636:IsPartOf>DMS_005678</s5636:IsPartOf>

C.4.2.47. isRedactionOf

Layer: Common; Group: Relation; Element: isRedactionOf	
Description	The resource is a redacted version of another resource, with some part of the content marked or removed to make the remainder of the content releasable.
XML Element	s5636:IsRedactionOf
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	`<s5636:IsRedactionOf xsi:type=”dcterms:URI”>http://some.repository/documents/doc0564_complete.pdf</s5636:IsRedactionOf>` `<s5636:IsRedactionOf>RES_000564</s5636:IsRedactionOf>`

C.4.2.48. reasonForRedaction

Layer: Common; Group: Relation; Element: reasonForRedaction	
Description	The reason for the publication of a redaction or extract.
XML Element	s5636:ReasonForRedaction
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:ReasonForRedaction> Release of document to Non-NATO Nation</s5636:ReasonForRedaction>`

C.4.2.49. isReferencedBy

Layer: Common; Group: Relation; Element: isReferencedBy	
Description	The described resource is referenced, cited or otherwise pointed to by the referenced resource.
XML Element	s5636:IsReferencedBy
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:IsReferencedBy xsi:type="dcterms:URI">http://some.repository/documents/project2.docx</s5636:IsReferencedBy> <s5636:IsReferencedBy> DMS_009876</s5636:IsReferencedBy>

C.4.2.50. isRequiredBy

Layer: Common; Group: Relation; Element: isRequiredBy	
Description	The described resource is required by the referenced resource to support its function, delivery or coherence of content.
XML Element	s5636:IsRequiredBy
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:IsRequiredBy xsi:type="dcterms:URI">http://some/repository/AC322-D(2005)0053-REV2-NNEC_Data_Strategy.pdf</s5636:IsRequiredBy> <s5636:IsRequiredBy>AC/322-D(2005)0053-REV2</s5636:IsRequiredBy>

C.4.2.51. isReplacedBy

Layer: Common; Group: Relation; Element: isReplacedBy	
Description	The described resource is supplanted, displaced or superseded by the referenced resource.
XML Element	s5636:IsReplacedBy
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:IsReplacedBy xsi:type="dcterms:URI">http://some/repository/ac322-d(2006)0007.pdf</s5636:IsReplacedBy> <s5636:IsReplacedBy>AC/322-D(2006)0007</s5636:IsReplacedBy>

C.4.2.52. isVersionOf

Layer: Common; Group: Relation; Element: isVersionOf	
Description	The described resource is a version edition or adaptation of the referenced resource.
XML Element	s5636:IsVersionOf
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:IsVersionOf xsi:type="dcterms:URI"> http://some.repository/documents/ncms_v1.pdf</s5636:IsVersionOf> <s5636:IsVersionOf>AC/322-D(2014)00xx</s5636:IsVersionOf>

C.4.2.53. providesDefinitionOf

Layer: Common; Group: Relation; Element: providesDefinitionOf	
Description	The described resource provides an effective working definition of an item whose usual name is given in the value.
XML Element	s5636:ProvidesDefinitionOf
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:ProvidesDefinitionOf xsi:type="dcterms:URI">http://some.repository/dmswg/terms_of_references.pdf </s5636:ProvidesDefinitionOf> <s5636:ProvidesDefinitionOf>DMS_012345</s5636:ProvidesDefinitionOf>

C.4.2.54. references

Layer: Common; Group: Relation; Element: references	
Description	The described resource references, cites or otherwise points to the referenced resource.
XML Element	s5636:References
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:References xsi:type="dcterms:URI"> http://some.repository/documents/reference0326.pdf</s5636:References> <s5636:References>C-M(2008)0113</s5636:References>

C.4.2.55. replaces

Layer: Common; Group: Relation; Element: replaces	
Description	The described resource supplants, displaces or supersedes the referenced resource.
XML Element	s5636:Replaces
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:Replaces xsi:type="dcterms:URI">http://some/repository/ac322-d(2006)0007.pdf</s5636:Replaces> <s5636:Replaces>AC/322-D(2006)0007<s5636:Replaces>

C.4.2.56. requires

Layer: Common; Group: Relation; Element: requires	
Description	The described resource requires the referenced resource to support its function, delivery or coherence of content.
XML Element	s5636:Requires
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:Requires xsi:type=”s5636:URI”> http://some.repository/documents/doc123.pdf</s5636:Requires> <s5636:Requires>RES_007654</s5636:Requires>

C.4.2.57. rights

Layer: Common; Group: Rights; Element: rights	
Description	Information about rights held in and over a resource.
XML Element	s5636:Rights
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:Rights> Permission is granted to anyone to display, copy, modify and annotate this text.</s5636:Rights>`

C.4.2.58. accessRights

Layer: Common; Group: Rights; Element: accessRights	
Description	Information about who can access the resource or an indication of its security status.
XML Element	s5636:AccessRights
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:AccessRights>IMS Users</s5636:AccessRights>`

C.4.2.59. copyright

Layer: Common; Group: Rights; Element: copyright	
Description	Indicator whether a particular resource is copyrighted
XML Element	s5636:Copyright
Syntax Encoding	s5636:BoolType
Examples	`<s5636:Copyright>true</s5636:Copyright>`

C.4.2.60. license

Layer: Common; Group: Rights; Element: license	
Description	A legal document giving official permission to do something with the resource.
XML Element	s5636:License
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:License xsi:type="dcterms:URI">http://www.gnu.org/licenses/gpl</s5636:License>

C.4.2.61. rightsHolder

Layer: Common; Group: Rights; Element: rightsHolder	
Description	A person or organization owning or managing rights over the resource.
XML Element	s5636:RightsHolder
Syntax Encoding	s5636:POCType
Examples	`<s5636:RightsHolder type=”organization”>NATO HQ, International Military Staff, Brussels, Belgium</s5636:RightsHolder>`

C.4.2.62. source

Layer: Common; Element: source	
Description	Reference to a resource from which the present resource is derived.
XML Element	s5636:Source
Syntax Encoding	s5636:SimpleLiteralType (default) dcterms:URI
Examples	<s5636:Source xsi:type="dcterms:URI"> http://dublincore.org/documents/2012/06/14/dces/</s5636:Source> <s5636:Source>AC/322-D(2006)0007</s5636:Source>

C.4.2.63. subject

Layer: Common; Group: Subject; Element: subject	
Description	The topic of the content of the resource.
XML Element	s5636:Subject
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:Subject>Governance for Service-Oriented Architecture</s5636:Subject>`

C.4.2.64. keyword

Layer: Common; Group: Subject; Element: keyword	
Description	A word or term used to describe, as specific as possible, the subject matter of the resource.
XML Element	s5636:Keyword
Syntax Encoding	s5636:CodeType
Examples	<s5636:Keyword cli:codeListURI"https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/keywords-v1.gc">Information_Management</s5636:Keyword>

C.4.2.65. subjectCategory

Layer: Common; Group: Subject; Element: subjectCategory	
Description	The **subjectCategory** specifies a coded value to categorize the resource along a highly controlled taxonomy or list.
XML Element	s5636:SubjectCategory
Syntax Encoding	s5636:CodeType
Examples	<s5636:SubjectCategory cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/subjectCategory-v1.gc ">RAD (Information C4I Systems, Plans and Planning) </s5636:SubjectCategory>

C.4.2.66. title

Layer: Common; Group: Title; Element: title	
Description	The title is the official name of a resource.
XML Element	s5636:Title
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:Title>The Primary Directive on Information Management</s5636:Title>`

C.4.2.67. alternativeTitle

Layer: Common; Group: Title; Element: alternativeTitle	
Description	Any form of the title used as a substitute or alternative to the formal title of the resource.
XML Element	s5636:AlternativeTitle
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:AlternativeTitle>PDIM</s5636:AlternativeTitle>`

C.4.2.68. subtitle

Layer: Common; Group: Title; Element: subtitle	
Description	Any subtitle of a resource that is associated with the formal title (or a part thereof)
XML Element	s5636:Subtitle
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:Subtitle>Study, Analysis and Way-Forward</s5636:Subtitle>`

C.4.2.69. type

Layer: Common; Element: type	
Description	The nature or genre of the resource.
XML Element	s5636:Type
Syntax Encoding	s5636:DCMITypeType
Examples	<s5636:Type>Image</s5636:Type> <s5636:Type>Text</s5636:Type>

C.4.3. Information Lifecycle Support Layer

C.4.3.1. recordsDisposition

Layer: Information Lifecycle Support; Group: Records; Element: recordsDisposition	
Description	Information about the disposal of a resource.
XML Element	s5636:RecordsDisposition
Syntax Encoding	s5636:CodeType
Examples	<s5636:RecordsDisposition cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/recordsDisposition-v1.gc > Transferred to NATO Archives</s5636:RecordsDisposition>

C.4.3.2. recordsHold

Layer: Information Lifecycle Support; Group: Records; Element: recordsHold	
Description	Indicator for a hold on a resource
XML Element	s5636:RecordsHold
Syntax Encoding	s5636:BoolType
Examples	`<s5636:RecordsHold>true</s5636:RecordsHold>`

C.4.3.3. status

Layer: Information Lifecycle Support; Element: status	
Description	The current status of a resource.
XML Element	s5636:Status
Syntax Encoding	s5636:CodeType
Examples	<s5636:Status cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/status-v1.gc">active</s5636:Status>

C.4.3.4. updatingFrequency

Layer: Information Lifecycle Support; Element: updatingFrequency	
Description	The interval (or frequency) of updates to the resource.
XML Element	s5636:UpdatingFrequency
Syntax Encoding	s5636:CodeType
Examples	<s5636:UpdatingFrequency cli:codeListURI="https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS/updatingFrequency-v1.gc"> daily</s5636:UpdatingFrequency>

C.4.3.5. version

Layer: Information Lifecycle Support; Element: version	
Description	The version of the resource
XML Element	s5636:Version
Syntax Encoding	s5636:SimpleLiteralType
Examples	`<s5636:Version>2.0.3</s5636:Version>`

C.5. METADATA BINDING

C.5.1. Introduction

NCMS metadata elements SHALL be bound to data objects in accordance with STANAG 4778 “Metadata Binding Mechanism” (Reference 2).

As defined in STANAG 4778, the metadata elements may be:

1. defined directly within the Metadata Binding, and/or
2. defined externally to the MetadataBinding and referenced from within the Metadata Binding.

C.5.2. Embedded Metadata

NCMS metadata elements MAY be embedded directly within a STANAG 4778 Binding Information.

Figure *4* shows an example binding of metadata to an XML schema, The STANAG 4778 BindingInformation contains the mandatory NCMS metadata elements (highlighted in red), wrapped in a <s4778:Metadata> element and embedded within with the <s4778:MetadataBinding> element.

```
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:s4774="urn:nato:stanag:4774:confidentialitymetadatalabel:1:0"
xmlns:s4778="urn:nato:stanag:4778:bindinginformation:1:0"
xmlns:s5636="urn:nato:stanag:5636:A:1:elements"
targetNamespace="urn:nato:stanag:5636:A:1:elements" >
 <xs:annotation>
  <xs:documentation>STANAG 4778 Binding Information</xs:documentation>
  <xs:appinfo source="urn:nato:stanag:4778:bindinginformation:1:0">
   <s4778:BindingInformation >
    <s4778:MetadataBindingContainer>
     <s4778:MetadataBinding>
      <s4778:Metadata>
       <s4774:originatorConfidentialityLabel>
        <s4774:ConfidentialityInformation>
         <s4774:PolicyIdentifier>ACME</s4774:PolicyIdentifier>
         <s4774:Classification>UNCLASSIFIED</s4774:Classification>
        </s4774:ConfidentialityInformation>
       <s4774:CreationDateTime>2020-02-08T16:11:43Z</s4774:CreationDateTime>
       </s4774:originatorConfidentialityLabel>
      </s4778:Metadata>
      <s4778:Metadata>
       <s5636:Title>NCMS XML Schema</s5636:Title>
      </s4778:Metadata>
      <s4778:Metadata>
       <s5636:Creator type="organization">NATO C&amp;amp;I Agency</s5636:Creator>
      </s4778:Metadata>
      <s4778:Metadata>
       <s5636:Publisher type="organization">NATO C&amp;amp;I Agency</s5636:Publisher>
      </s4778:Metadata>
      <s4778:Metadata>
       <s5636:Identifier>urn:nato:stanag:5636:A:1:elements</s5636:Identifier>
      </s4778:Metadata>
      <s4778:Metadata>
       <s5636:DateCreated>2020-03-13T08:49:56+01:00</s5636:DateCreated>
      </s4778:Metadata>
      <s4778:DataReference URI=""/>
     </s4778:MetadataBinding>
    </s4778:MetadataBindingContainer>
   </s4778:BindingInformation>
  </xs:appinfo>
 </xs:annotation>

</xs:schema>
```

Figure 4: NCMS Metadata Embedded Within a STANAG 4778 Metadata Binding

C.5.3. Referenced Metadata

NCMS metadata elements MAY be referenced from another location, outside of the STANAG 4778 BindingInformation. For example, the NCMS metadata elements may contained within the data object itself and referenced with the STANAG 4778 Metadata Binding.

Figure *5* shows the NCMS metadata elements defined with the <xs:appinfo> element of the XML schema and then each of the metadata elements are referenced using a <s4778:MetadataReference> element. Each <s4778:MetadataReference> uses an XPointer reference to the actual NCMS metadata element, through the use of XML identifiers.

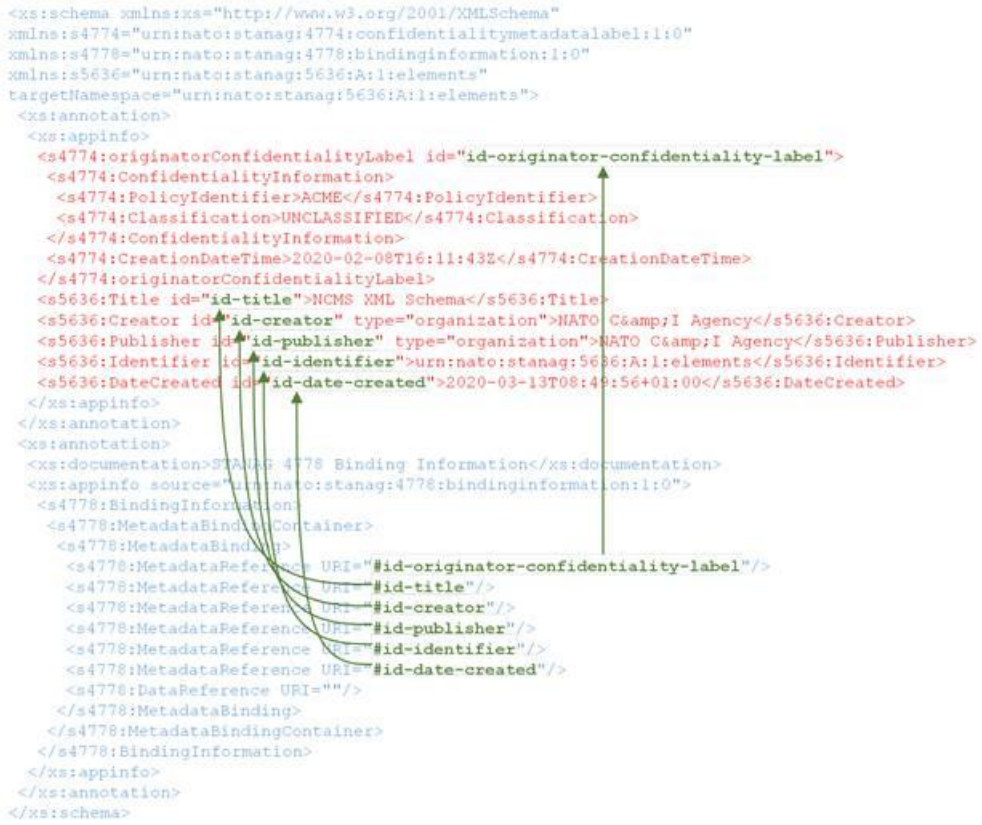

Figure 5: NCMS Metadata Referenced From Within a STANAG 4778 Metadata Binding

C.5.4. Equivalent Metadata

A data object to which the NCMS metadata elements are bound through a STANAG 4778 MetadataBinding may already contain application or COI-specific metadata elements. Some of these COI-specific metadata elements may be semantically,

and syntactically equivalent to the NCMS metadata elements. For example, a <coi:Label> metadata element may be semantically and syntactically equivalent to the <s5636:Title> metadata element. Whilst the <coi:Label> may be used with the STANAG 4778 MetadataBinding (either embedded or referenced), STANAG 4778 does not provide a specific mechanism to indicate that the <coi:Label> can be considered equivalent to the <s5636:Title>.

STANAG 4778 does provide for the augmentation of both the <s4778:Metadata> and <s4778:MetadataReference> with custom XML attributes. The NCMS makes uses this augmentation mechanism to definine a XML attribute, s5636:element, which can be used to specify the qualified name of the equivalent NCMS element of a COI metadata element.

Figure *6* shows an example of the use of NATO Core Data Framework (NCDF) annotations, contained with the xs:appinfo of the XML schema, being referenced in a STANAG 4778 MetadataBinding and identified as equivalent to NCMS metadata elements. Specifically:

i. The NCDF ID annotation is identified as being semantically and syntactically equivalent to the NCMS Identifier metadata element
ii. The NCDF Label annotation is identified as being semantically and syntactically equivalent to the NCMS Title metadata element

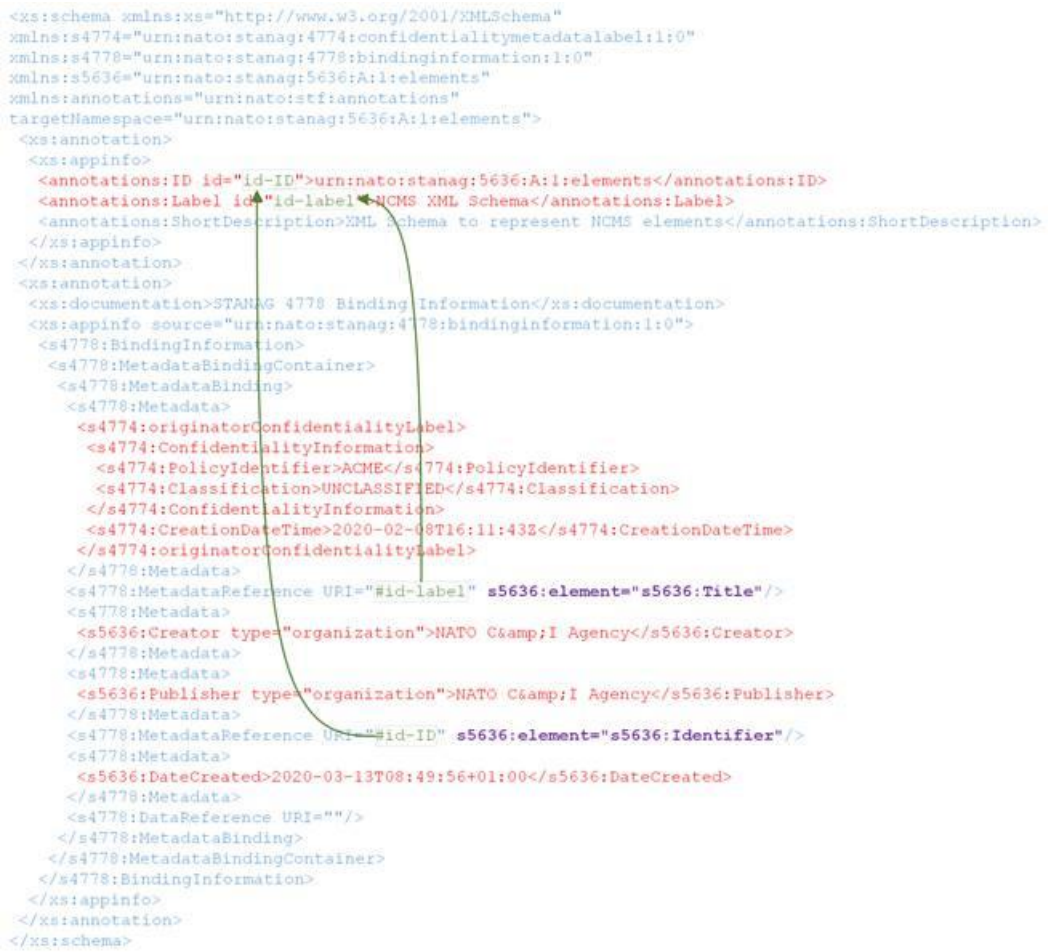

Figure 6: NCMS Metadata Referenced From COI Metadata

The use of the s5636:element attribute allows COIs to re-use their existing metadata elements and so simplifies the process of conforming with ADatP-5636.

The s5636:element attribute must only be used with semantically and syntactically equivalent COI metadata elements.

For NCMS Security Layer metadata elements (originatorConfidentialityLabel, alternativeConfidentialittyLabel) the equivalent COI metadata element MUST have the type s4774:ConfidentialityLabelType. For example,

```
<xsd:element name="ConceptMetadataMetadataConfidentialityLabel" type="s4774:ConfidentialityLabelType"/>
```

For all other NCMS metadata elements, the equivalent COI metadata element must have only text content, as defined by the dc:SimpleLiteral type.The value of the COI metadata element must adhere to the same constraints as the corresponding NCMS metadata element (default) type, for example, havin the required XML attributes.

The validation of a STANAG 4778 MetadataBinding against the NCMS and COI XML schemas will not verify a valid syntactic equivalency. Syntactic equivalency can however be performed using other tools, such as Schematron rules.

Appendix 1 XML SCHEMA

C-1.1 Introduction

The NCMS XML Schema is a NCDF XML Naming and Design Rules (XNDR) reference schema[89]. The NCMS XML Schema is published in the NATO Metadata Registry and Repository (NMRR) at:

- https://nmrr.ncia.nato.int/rest/doc/NATO/IKM/NCMS

The NMRR also contains the imported XML schemas, referenced by the NCMS XML Schema, which are not included in this Appendix.

The NCMS XML Schema published in the NMRR will contain the latest version of the NCMS schema, which may have been updated, for example, to correct any errata or comply with the latest NCDF XNDR. Developers should thus use the latest NCMS XML Schema contained in the NMRR in preference to extracting the XML schema from this document.

C-1.2 XML Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
   xmlns:xml="http://www.w3.org/XML/1998/namespace"
   xmlns:dc="http://purl.org/dc/elements/1.1/"
   xmlns:dcmitype="http://purl.org/dc/dcmitype/"
   xmlns:dcterms="http://purl.org/dc/terms/"
   xmlns:s4774="urn:nato:stanag:4774:confidentialitymetadatalabel:1:0"
   xmlns:s4778="urn:nato:stanag:4778:bindinginformation:1:0"
   xmlns:s4778-ext="urn:nato:stanag:4778:bindinginformation:extensions:1:0"
   xmlns:ct="urn:nato:ncdf:release:conformance-targets:1:0"
```

[8] The NCMS XML Schema is not a fully compliant NCDF XNDR reference schema as the NCMS elements are derived Dublin Core elements, which cannot be augmented (using an AugmentionPoint).

[9] As a NCDF XNDR Schema, the NCMS XML Schema contains a complete set of annotations that support the automatic generation of human readable documentation. The intention is that a significant part of Annex C will be automatically generated from the NCMS XML Schema, thus ensuring consistency between the ADatP documentation and the XML artefacts.

```
   xmlns:cli="urn:nato:ncdf:specification:code-lists:1:0:code-lists-instance"
   xmlns:structures="urn:nato:ncdf:release:structures:1:0"
   xmlns="urn:nato:stanag:5636:A:1:elements"
   xmlns:s5636="urn:nato:stanag:5636:A:1:elements"
   xmlns:s5636bp="urn:nato:stanag:5636:A:1:bindingprofile:bdo"
   xmlns:annotations="urn:nato:stf:annotations"
   targetNamespace="urn:nato:stanag:5636:A:1:elements"
   elementFormDefault="qualified" attributeFormDefault="unqualified"
   version="RD2"
   ct:conformanceTargets="urn:nato:ncdf:specification:xml-naming-and-design-
rules:1:0:referenceschemadocument">
   <xs:annotation>
      <xs:documentation>
       STANAG 5636 elements XML Schema
       XML Schema for urn:nato:stanag:5636:A:1:elements namespace

       Created 20-03-2020

       This schema declares XML elements NCMS elements for the urn:nato:stanag:5636:A:1:elements
namespace.

      </xs:documentation>
      <xs:appinfo>
         <annotations:ID>urn:nato:stanag:5636:A:1:elements</annotations:ID>
         <annotations:Label>NCMS XML Schema</annotations:Label>
         <annotations:ShortDescription>XML Schema to represent NCMS
elements</annotations:ShortDescription>
         <annotations:Version>A:1</annotations:Version>
         <annotations:Usage/>
         <annotations:DataStructure>Schema</annotations:DataStructure>
      </xs:appinfo>
   </xs:annotation>
   <xs:annotation>
      <xs:documentation>STANAG 4778 Binding Information</xs:documentation>
      <xs:appinfo source="urn:nato:stanag:4778:bindinginformation:1:0">
         <s4778:BindingInformation s4778-ext:profile="urn:nato:stanag:4778:profile:xml:schema:1:0"
id="ncms-metadata">
```

```
            <s4778:MetadataBindingContainer>
               <s4778:MetadataBinding>
                  <s4778:Metadata>
                     <s4774:originatorConfidentialityLabel>
                        <s4774:ConfidentialityInformation>
                           <s4774:PolicyIdentifier>NATO</s4774:PolicyIdentifier>
                           <s4774:Classification>RESTRICTED</s4774:Classification>
                           <s4774:Category Type="PERMISSIVE" TagName="Context">
                              <s4774:GenericValue>NATO</s4774:GenericValue>
                           </s4774:Category>
                        </s4774:ConfidentialityInformation>
                        <s4774:OriginatorID
IDType="uniformResourceIdentifier">https://nmrr.ncia.nato.int/rest/doc/NATO%20Interim/IA/Security%20Poli
cy/spif2gc.xsl</s4774:OriginatorID>
                        <s4774:CreationDateTime>2020-02-08T16:11:43Z</s4774:CreationDateTime>
                     </s4774:originatorConfidentialityLabel>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Title>NCMS XML Schema</s5636:Title>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Creator type="organization">NATO C&amp;amp;I Agency</s5636:Creator>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Publisher type="organization">NATO C&amp;amp;I Agency</s5636:Publisher>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Identifier>urn:nato:stanag:5636:A:1:elements</s5636:Identifier>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:DateCreated>2020-03-13T08:49:56+01:00</s5636:DateCreated>
                  </s4778:Metadata>
                  <s4778:DataReference URI=""/>
               </s4778:MetadataBinding>
            </s4778:MetadataBindingContainer>
            <s5636bp:BindingInformationContainer>
               <s4778:BindingInformation s4778-ext:profile="urn:nato:stanag:5636:A:1:bindingprofile:bdo">
```

```
                        <s4778:MetadataBindingContainer>
                           <s4778:MetadataBinding>
                              <!-- This is the NCMS "metadataConfidentialityLabel" -->
                              <s4778:Metadata>
                                 <s4774:originatorConfidentialityLabel>
                                    <s4774:ConfidentialityInformation>
                                       <s4774:PolicyIdentifier>NATO</s4774:PolicyIdentifier>
                                       <s4774:Classification>RESTRICTED</s4774:Classification>
                                       <s4774:Category Type="PERMISSIVE" TagName="Context">
                                          <s4774:GenericValue>NATO</s4774:GenericValue>
                                       </s4774:Category>
                                 </s4774:ConfidentialityInformation>
                                 <s4774:OriginatorID
IDType="uniformResourceIdentifier">https://nmrr.ncia.nato.int/rest/doc/NATO%20Interim/IA/Security%20Policy/spi
f2gc.xsl</s4774:OriginatorID>
                                 <s4774:CreationDateTime>2020-02-08T16:11:43Z</s4774:CreationDateTime>
                              </s4774:originatorConfidentialityLabel>
                           </s4778:Metadata>
                           <s4778:DataReference URI="#ncms-metadata"/>
                        </s4778:MetadataBinding>
                     </s4778:MetadataBindingContainer>
                  </s4778:BindingInformation>
               </s5636bp:BindingInformationContainer>
            </s4778:BindingInformation>
         </xs:appinfo>
      </xs:annotation>
      <xs:import namespace="http://www.w3.org/XML/1998/namespace" schemaLocation="xml.xsd"/>
      <xs:import namespace="http://purl.org/dc/elements/1.1/" schemaLocation="dc.xsd"/>
      <xs:import namespace="http://purl.org/dc/terms/" schemaLocation="dcterms.xsd"/>
      <xs:import namespace="urn:nato:stanag:4774:confidentialitymetadatalabel:1:0" schemaLocation="nl-cl.xsd"/>
      <xs:import namespace="urn:nato:stanag:4778:bindinginformation:1:0" schemaLocation="nl-mb.xsd"/>
      <xs:import  namespace="urn:nato:ncdf:specification:code-lists:1:0:code-lists-instance"  schemaLocation="code-
list-instance.xsd"/>
      <xs:import namespace="urn:nato:ncdf:release:structures:1:0" schemaLocation="structures.xsd"/>
      <!-- Security Layer -->
      <!-- originatorConfidentialityLabel - use STANAG 4774 -->
      <!-- alternativeConfidentialityLabel - use STANAG 4774  -->
```

```
   <!-- End of Security Layer-->
   <!-- Common Layer -->
   <xs:element name="Contributor" type="POCType" substitutionGroup="dcterms:contributor" nillable="true">
      <xs:annotation>
         <xs:documentation>An entity responsible for making contributions to the content of the information
resource. </xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Contributor</annotations:ID>
            <annotations:Label>Contributor</annotations:Label>
            <annotations:ShortDescription>An entity responsible for making contributions to the content of the
information resource. </annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- Coverage Group -->
   <xs:element name="CountryCode" type="CodeType" substitutionGroup="dc:coverage" nillable="true">
      <xs:annotation>
         <xs:documentation>A standards-based abbreviation of a country name.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:CountryCode</annotations:ID>
            <annotations:Label>CountryCode</annotations:Label>
            <annotations:ShortDescription>A      standards-based      abbreviation      of      a      country
name.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Coverage</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- geographicEncodingScheme - use xsi:type of geographicReference -->
   <xs:element   name="GeographicReference"   type="s5636:SimpleLiteralType"   substitutionGroup="dc:coverage"
nillable="true">
      <xs:annotation>
         <xs:documentation>A    geographic    reference    specified    using    a    particular    encoding
```

```
scheme.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:GeographicReference</annotations:ID>
            <annotations:Label>GeographicReference</annotations:Label>
            <annotations:ShortDescription>A geographic reference specified using a particular encoding
scheme.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage>The encoding scheme, and type of reference, is indicate by the xsi:type.
s5636:UTMType dcterms:Point and dcterms:Box may be used. s5636:SimpleLiteralType must not be
used.</annotations:Usage>
            <annotations:DataStructure>Metadata:Common:Coverage</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="PlaceName" type="s5636:CodeType" substitutionGroup="dc:coverage" nillable="true">
      <xs:annotation>
         <xs:documentation>The name of a place of interest, other than a country or region.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:PlaceName</annotations:ID>
            <annotations:Label>PlaceName</annotations:Label>
            <annotations:ShortDescription>The name of a place of interest, other than a country or
region.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Coverage</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="Region" type="s5636:CodeType" substitutionGroup="dc:coverage" nillable="true">
      <xs:annotation>
         <xs:documentation>The name of a sub-national or transnational geographic or geopolitical region that is
a subject of the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Region</annotations:ID>
            <annotations:Label>Region</annotations:Label>
            <annotations:ShortDescription>The name of a sub-national or transnational geographic or geopolitical
region that is a subject of the information resource.</annotations:ShortDescription>
```

```
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Coverage</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="TimePeriod" type="dcterms:Period" substitutionGroup="dcterms:temporal" nillable="true">
      <xs:annotation>
         <xs:documentation>The time period that the content of the information resource
covers.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:TimePeriod</annotations:ID>
            <annotations:Label>TimePeriod</annotations:Label>
            <annotations:ShortDescription>The time period that the content of the information resource
covers.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Coverage</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Coverage Group-->
   <xs:element name="Creator" type="POCType" substitutionGroup="dcterms:creator" nillable="true">
      <xs:annotation>
         <xs:documentation>An entity primarily responsible for creating the information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Creator</annotations:ID>
            <annotations:Label>Creator</annotations:Label>
            <annotations:ShortDescription>An entity primarily responsible for creating the information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
```

```
   <xs:element name="Custodian" type="POCType" substitutionGroup="dc:any" nillable="true">
      <xs:annotation>
         <xs:documentation>The organizational element that currently maintains the information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Custodian</annotations:ID>
            <annotations:Label>Custodian</annotations:Label>
            <annotations:ShortDescription>The organizational element that currently maintains the information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- Date Group -->
   <xs:element     name="DateAccepted"     type="s5636:W3CDTFType"     substitutionGroup="dcterms:dateAccepted"
nillable="true">
      <xs:annotation>
         <xs:documentation>The date on which an information resource was accepted (by a department or an
organizational element)</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateAccepted</annotations:ID>
            <annotations:Label>DateAccepted</annotations:Label>
            <annotations:ShortDescription>The date on which an information resource was accepted (by a department
or an organizational element).</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateAcquired" type="s5636:W3CDTFType" substitutionGroup="dc:date" nillable="true">
      <xs:annotation>
         <xs:documentation>The date on which the information resource was received into the
organization.</xs:documentation>
         <xs:appinfo>
```

```
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateAcquired</annotations:ID>
            <annotations:Label>DateAcquired</annotations:Label>
            <annotations:ShortDescription>The date on which the information resource was received into the
organization.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element     name="DateAvailable"     type="s5636:W3CDTFType"     substitutionGroup="dcterms:available"
nillable="true">
      <xs:annotation>
         <xs:documentation>The   date   on   which   an   information   resource   became   or   will   become
available.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateAvailable</annotations:ID>
            <annotations:Label>DateAvailable</annotations:Label>
            <annotations:ShortDescription>The date on which an information resource became or will become
available.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateClosed" type="s5636:W3CDTFType" substitutionGroup="dc:date" nillable="true">
      <xs:annotation>
         <xs:documentation>The date on which an information resource will be closed.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateClosed</annotations:ID>
            <annotations:Label>DateClosed</annotations:Label>
            <annotations:ShortDescription>The  date from which the resource should no longer be referenced or
included in a collection of resources..</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
```

```
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element   name="DateCopyrighted"   type="s5636:W3CDTFType"   substitutionGroup="dcterms:dateCopyrighted"
nillable="true">
      <xs:annotation>
         <xs:documentation>The date of a statement of copyright.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateCopyrighted</annotations:ID>
            <annotations:Label>DateCopyrighted</annotations:Label>
            <annotations:ShortDescription>The date of a statement of copyright.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateCreated" type="s5636:W3CDTFType" substitutionGroup="dcterms:created" nillable="true">
      <xs:annotation>
         <xs:documentation>The date on which the information resource was created.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateCreated</annotations:ID>
            <annotations:Label>DateCreated</annotations:Label>
            <annotations:ShortDescription>The    date    on    which    the    information    resource    was
created.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateCutOff" type="s5636:W3CDTFType" substitutionGroup="dc:date" nillable="true">
      <xs:annotation>
         <xs:documentation>The date from which on the information resource should no longer be added to or
modified.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateCutOff</annotations:ID>
```

```
            <annotations:Label>DateCutOff</annotations:Label>
            <annotations:ShortDescription>The date from which on the information resource should no longer be
added to or modified.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateDeclared" type="s5636:W3CDTFType" substitutionGroup="dc:date" nillable="true">
      <xs:annotation>
         <xs:documentation>Date on which the information resource was declared, filed or
stored.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateDeclared</annotations:ID>
            <annotations:Label>DateDeclared</annotations:Label>
            <annotations:ShortDescription>Date on which the information resource was declared, filed or
stored.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateDisposition" type="s5636:W3CDTFType" substitutionGroup="dc:date" nillable="true">
      <xs:annotation>
         <xs:documentation>The disposition date of the information resource, i.e. the date when the information
resource will be archived or destroyed.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateDisposition</annotations:ID>
            <annotations:Label>DateDisposition</annotations:Label>
            <annotations:ShortDescription>The disposition date of the information resource, i.e. the date when
the information resource will be archived or destroyed.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
```

```
      </xs:annotation>
   </xs:element>
   <xs:element name="DateIssued" type="s5636:W3CDTFType" substitutionGroup="dcterms:issued" nillable="true">
      <xs:annotation>
         <xs:documentation>The date of formal issuance or publication of the information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateIssued</annotations:ID>
            <annotations:Label>DateIssued</annotations:Label>
            <annotations:ShortDescription>The date of formal issuance or publication of the information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateModified" type="s5636:W3CDTFType" substitutionGroup="dcterms:modified"
nillable="true">
      <xs:annotation>
         <xs:documentation>The date on which the information resource was changed.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateModified</annotations:ID>
            <annotations:Label>DateModified</annotations:Label>
            <annotations:ShortDescription>The date on which the information resource was
changed.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateNextVersionDue" type="s5636:W3CDTFType" substitutionGroup="dc:date" nillable="true">
      <xs:annotation>
         <xs:documentation>The date on which the information resource is due to be superseded.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateNextVersionDue</annotations:ID>
```

```
            <annotations:Label>DateNextVersionDue</annotations:Label>
            <annotations:ShortDescription>The date on which the information resource is due to be
superseded.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="DateSubmitted"    type="s5636:W3CDTFType"    substitutionGroup="dcterms:dateSubmitted"
nillable="true">
      <xs:annotation>
         <xs:documentation>The date on which an information resource was submitted.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateNextVersionDue</annotations:ID>
            <annotations:Label>DateSubmitted</annotations:Label>
            <annotations:ShortDescription>he    date    on    which    an    information    resource    was
submitted.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="DateValid" type="s5636:W3CDTFType" substitutionGroup="dcterms:valid" nillable="true">
      <xs:annotation>
         <xs:documentation>The date of validity of an information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:DateValid</annotations:ID>
            <annotations:Label>DateValid</annotations:Label>
            <annotations:ShortDescription>The      date      of      validity      of      an      information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Date</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
```

```
   </xs:element>
   <!-- End of Date Group -->
   <!-- Description Group -->
   <xs:element   name="Description"   type="s5636:SimpleLiteralType"   substitutionGroup="dcterms:description"
nillable="true">
      <xs:annotation>
         <xs:documentation>The  description  provides  an  overview  of  the  contents  of  the  information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Description</annotations:ID>
            <annotations:Label>Description</annotations:Label>
            <annotations:ShortDescription>The description provides an overview of the contents of the information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Description</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="Abstract"    type="s5636:SimpleLiteralType"    substitutionGroup="dcterms:description"
nillable="true">
      <xs:annotation>
         <xs:documentation>The   abstract   is   a   summary   of   the   content   of   the   information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Abstract</annotations:ID>
            <annotations:Label>Abstract</annotations:Label>
            <annotations:ShortDescription>The  abstract  is  a  summary  of  the  content  of  the  information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Description</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element                        name="TableOfContents"                        type="s5636:SimpleLiteralType"
substitutionGroup="dcterms:tableOfContents" nillable="true">
```

```
      <xs:annotation>
         <xs:documentation>The table of contents is a formatted outline of the structure of information resource,
typically listing the sub-units (chapters, sections) of the source.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:TableOfContents</annotations:ID>
TableOfContents          <annotations:ShortDescription>The table of contents is a formatted outline of the
structure of information resource, typically listing the sub-units (chapters, sections) of the
source.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Description</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Description Group -->
   <!-- Format Group -->
   <xs:element name="Extent" type="ExtentType" substitutionGroup="dcterms:extent" nillable="true">
      <xs:annotation>
         <xs:documentation>The size or duration of the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Extent</annotations:ID>
            <annotations:Label>Extent</annotations:Label>
            <annotations:ShortDescription>The      size      or      duration      of      the      information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Format</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- extentQualifer - use Extent type -->
   <xs:element name="MediaFormat" type="s5636:CodeType" substitutionGroup="dcterms:format" nillable="true">
      <xs:annotation>
         <xs:documentation>The format of the media used for the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:MediaFormat</annotations:ID>
            <annotations:Label>MediaFormat</annotations:Label>
```

```
            <annotations:ShortDescription>The format of the media used for the information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Format</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="Medium" type="s5636:CodeType" substitutionGroup="dcterms:medium" nillable="true">
      <xs:annotation>
         <xs:documentation>The physical medium or instantiation of the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Medium</annotations:ID>
            <annotations:Label>Medium</annotations:Label>
            <annotations:ShortDescription>The physical medium or instantiation of the information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Format</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Format Group -->
   <!-- Identifier Group -->
   <xs:element name="ExternalIdentifier" type="s5636:SimpleLiteralType" substitutionGroup="dcterms:identifier"
nillable="true">
      <xs:annotation>
         <xs:documentation>An external reference to the information resource associated with the information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:ExternalIdentifier</annotations:ID>
            <annotations:Label>ExternalIdentifier</annotations:Label>
            <annotations:ShortDescription>An external reference to the information resource associated with the
information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Identifier</annotations:DataStructure>
```

```
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="Identifier"    type="s5636:SimpleLiteralType"    substitutionGroup="dcterms:identifier"
nillable="true">
      <xs:annotation>
         <xs:documentation>An   unambiguous   reference   to   the   information   resource   within   a   given
context.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Identifier</annotations:ID>
            <annotations:Label>Identifier</annotations:Label>
            <annotations:ShortDescription>An unambiguous reference to the information resource within a given
context.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Identifier</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Identifier Group -->
   <xs:element name="Language" type="s5636:CodeType" substitutionGroup="dcterms:language" nillable="true">
      <xs:annotation>
         <xs:documentation>The language(s) of the content of the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Language</annotations:ID>
            <annotations:Label>Language</annotations:Label>
            <annotations:ShortDescription>The    language(s)    of    the    content    of    the    information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="Provenance"    type="s5636:SimpleLiteralType"    substitutionGroup="dcterms:provenance"
nillable="true">
      <xs:annotation>
```

```
         <xs:documentation>A statement of any changes in ownership and custody of the resource since its creation
that are significant for its authenticity, integrity and interpretation. The statement may include a description
of any changes successive custodians made to the resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Provenance</annotations:ID>
            <annotations:Label>Provenance</annotations:Label>
            <annotations:ShortDescription>A statement of any changes in ownership and custody of the resource
since its creation that are significant for its authenticity, integrity and interpretation. The statement may
include a description of any changes successive custodians made to the resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="ContextActivity" type="s5636:CodeType" substitutionGroup="dc:any" nillable="true">
      <xs:annotation>
         <xs:documentation>The contextActivity is the name of the operation, exercise or education programme, if
any, to which an information resource pertains.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:ContextActivity</annotations:ID>
            <annotations:Label>ContextActivity</annotations:Label>
            <annotations:ShortDescription>The contextActivity is the name of the operation, exercise or education
programme, if any, to which an information resource pertains.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="Publisher" type="POCType" substitutionGroup="dcterms:publisher" nillable="true">
      <xs:annotation>
         <xs:documentation>The entity responsible for making the information resource officially
available.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Publisher</annotations:ID>
            <annotations:Label>Publisher</annotations:Label>
```

```
            <annotations:ShortDescription>The entity responsible for making the information resource officially
available.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- Relation Group -->
   <xs:element      name="Authorizes"      type="s5636:SimpleLiteralType"      substitutionGroup="dc:relation"
nillable="true">
      <xs:annotation>
         <xs:documentation>The information resource provides an authorization for another information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Authorizes</annotations:ID>
            <annotations:Label>Authorizes</annotations:Label>
            <annotations:ShortDescription>The information resource provides an authorization for another
information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="ConformsTo"    type="s5636:SimpleLiteralType"    substitutionGroup="dcterms:conformsTo"
nillable="true">
      <xs:annotation>
         <xs:documentation>A reference to an established standard to which the information resource
conforms.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:ConformsTo</annotations:ID>
            <annotations:Label>ConformsTo</annotations:Label>
            <annotations:ShortDescription>A reference to an established standard to which the information
resource conforms.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
```

```
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element     name="HasFormat"     type="s5636:SimpleLiteralType"     substitutionGroup="dcterms:hasFormat"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource pre-existed the referenced information resource,
which is essentially the same intellectual content presented in another format.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:HasFormat</annotations:ID>
            <annotations:Label>HasFormat</annotations:Label>
            <annotations:ShortDescription>The described information resource pre-existed the referenced
information resource, which is essentially the same intellectual content presented in another
format.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element      name="HasPart"      type="s5636:SimpleLiteralType"      substitutionGroup="dcterms:hasPart"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource includes the referenced information resource either
physically or logically.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:HasPart</annotations:ID>
            <annotations:Label>HasPart</annotations:Label>
            <annotations:ShortDescription>The described information resource includes the referenced information
resource either physically or logically.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
```

```
   <xs:element     name="HasRedaction"     type="s5636:SimpleLiteralType"     substitutionGroup="dc:relation"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource has a redacted version, namely the referenced
information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:HasRedaction</annotations:ID>
            <annotations:Label>HasRedaction</annotations:Label>
            <annotations:ShortDescription>The described information resource has a redacted version, namely the
referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="HasVersion"    type="s5636:SimpleLiteralType"    substitutionGroup="dcterms:hasVersion"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource has a version edition or adaptation, namely the
referenced information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:HasVersion</annotations:ID>
            <annotations:Label>HasVersion</annotations:Label>
            <annotations:ShortDescription>The described information resource has a version edition or adaptation,
namely the referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element     name="IsAuthorizedBy"     type="s5636:SimpleLiteralType"     substitutionGroup="dc:relation"
nillable="true">
      <xs:annotation>
         <xs:documentation>The information resource that provides an authorization for this information
resource.</xs:documentation>
```

```
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsAuthorizedBy</annotations:ID>
            <annotations:Label>IsAuthorizedBy</annotations:Label>
            <annotations:ShortDescription>The information resource that provides an authorization for this
information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element      name="IsDefinedBy"      type="s5636:SimpleLiteralType"      substitutionGroup="dc:relation"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource is given an effective working definition by the
referenced information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsDefinedBy</annotations:ID>
            <annotations:Label>IsDefinedBy</annotations:Label>
            <annotations:ShortDescription>The described information resource is given an effective working
definition by the referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="IsFormatOf"    type="s5636:SimpleLiteralType"    substitutionGroup="dcterms:isFormatOf"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource is the same intellectual content of the referenced
information resource, but presented in another format.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsFormatOf</annotations:ID>
            <annotations:Label>IsFormatOf</annotations:Label>
            <annotations:ShortDescription>The described information resource is the same intellectual content of
the referenced information resource, but presented in another format.</annotations:ShortDescription>
```

```
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element     name="IsPartOf"     type="s5636:SimpleLiteralType"     substitutionGroup="dcterms:isPartOf"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource is given an effective working definition by the
referenced information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsDefinedBy</annotations:ID>
            <annotations:Label>IsDefinedBy</annotations:Label>
            <annotations:ShortDescription>The described information resource is given an effective working
definition by the referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element     name="IsRedactionOf"     type="s5636:SimpleLiteralType"     substitutionGroup="dc:relation"
nillable="true">
      <xs:annotation>
         <xs:documentation>The information resource is a redacted version of another information resource, with
some part of the content marked or removed to make the remainder of the content releasable.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsRedactionOf</annotations:ID>
            <annotations:Label>IsRedactionOf</annotations:Label>
            <annotations:ShortDescription>The information resource is a redacted version of another information
resource, with some part of the content marked or removed to make the remainder of the content
releasable.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
```

```
      </xs:annotation>
   </xs:element>
   <xs:element name="IsReferencedBy" type="s5636:SimpleLiteralType" substitutionGroup="dcterms:isReferencedBy"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource is referenced, cited or otherwise pointed to by
the referenced information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsReferencedBy</annotations:ID>
            <annotations:Label>IsReferencedBy</annotations:Label>
            <annotations:ShortDescription>The described information resource is referenced, cited or otherwise
pointed to by the referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element   name="IsRequiredBy"   type="s5636:SimpleLiteralType"   substitutionGroup="dcterms:isRequiredBy"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource is required by the referenced information resource
to support its function, delivery or coherence of content.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsRequiredBy</annotations:ID>
            <annotations:Label>IsRequiredBy</annotations:Label>
            <annotations:ShortDescription>The described information resource is required by the referenced
information resource to support its function, delivery or coherence of content.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element   name="IsReplacedBy"   type="s5636:SimpleLiteralType"   substitutionGroup="dcterms:isReplacedBy"
nillable="true">
      <xs:annotation>
```

```
         <xs:documentation>The described information resource is supplanted, displaced or superseded by the
referenced information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsReplacedBy</annotations:ID>
            <annotations:Label>IsReplacedBy</annotations:Label>
            <annotations:ShortDescription>The described information resource is supplanted, displaced or
superseded by the referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element   name="IsVersionOf"   type="s5636:SimpleLiteralType"   substitutionGroup="dcterms:isVersionOf"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource is a version edition or adaptation of the referenced
information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:IsVersionOf</annotations:ID>
            <annotations:Label>IsVersionOf</annotations:Label>
            <annotations:ShortDescription>The described information resource is a version edition or adaptation
of the referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element   name="ProvidesDefinitionOf"   type="s5636:SimpleLiteralType"   substitutionGroup="dc:relation"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource provides an effective working definition of an
item whose usual name is given in the value.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:ProvidesDefinitionOf</annotations:ID>
            <annotations:Label>ProvidesDefinitionOf</annotations:Label>
```

```
            <annotations:ShortDescription>The described information resource provides an effective working
definition of an item whose usual name is given in the value.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="ReasonForRedaction"    type="s5636:SimpleLiteralType"    substitutionGroup="dc:relation"
nillable="true">
      <xs:annotation>
         <xs:documentation>The reason for the publication of a redaction or extract.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:ReasonForRedaction</annotations:ID>
            <annotations:Label>ReasonForRedaction</annotations:Label>
            <annotations:ShortDescription>The    reason    for    the    publication    of    a    redaction    or
extract.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element    name="References"    type="s5636:SimpleLiteralType"    substitutionGroup="dcterms:references"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource references, cites or otherwise points to the
referenced information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:References</annotations:ID>
            <annotations:Label>References</annotations:Label>
            <annotations:ShortDescription>The described information resource references, cites or otherwise
points to the referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
```

```
      </xs:annotation>
   </xs:element>
   <xs:element     name="Replaces"     type="s5636:SimpleLiteralType"     substitutionGroup="dcterms:replaces"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource supplants, displaces or supersedes the referenced
information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Replaces</annotations:ID>
            <annotations:Label>Replaces</annotations:Label>
            <annotations:ShortDescription>The described information resource supplants, displaces or supersedes
the referenced information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element     name="Requires"     type="s5636:SimpleLiteralType"     substitutionGroup="dcterms:requires"
nillable="true">
      <xs:annotation>
         <xs:documentation>The described information resource requires the referenced information resource to
support its function, delivery or coherence of content.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Requires</annotations:ID>
            <annotations:Label>Requires</annotations:Label>
            <annotations:ShortDescription>The described information resource requires the referenced information
resource to support its function, delivery or coherence of content.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Relation</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Relation Group -->
   <!-- Rights Group -->
   <xs:element name="Rights" type="s5636:SimpleLiteralType" substitutionGroup="dcterms:rights" nillable="true">
```

```
      <xs:annotation>
         <xs:documentation>Information about rights held in and over an information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Rights</annotations:ID>
            <annotations:Label>Rights</annotations:Label>
            <annotations:ShortDescription>Information about rights held in and over an information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Rights</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="AccessRights" type="s5636:SimpleLiteralType" substitutionGroup="dcterms:accessRights"
nillable="true">
      <xs:annotation>
         <xs:documentation>nformation about who can access the information resource or an indication of its
security status.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:AccessRights</annotations:ID>
            <annotations:Label>AccessRights</annotations:Label>
            <annotations:ShortDescription>nformation about who can access the information resource or an
indication of its security status.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Rights</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="Copyright" type="s5636:BoolType" substitutionGroup="dc:rights" nillable="true">
      <xs:annotation>
         <xs:documentation>Indicator whether a particular information resource is copyrighted</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Copyright</annotations:ID>
            <annotations:Label>Copyright</annotations:Label>
            <annotations:ShortDescription>Indicator whether a particular information resource is
copyrighted.</annotations:ShortDescription>
```

```
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Rights</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element      name="License"      type="s5636:SimpleLiteralType"      substitutionGroup="dcterms:license"
nillable="true">
      <xs:annotation>
         <xs:documentation>A legal document giving official permission to do something with the information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:License</annotations:ID>
            <annotations:Label>License</annotations:Label>
            <annotations:ShortDescription>A legal document giving official permission to do something with the
information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Rights</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="RightsHolder" type="POCType" substitutionGroup="dcterms:rightsHolder" nillable="true">
      <xs:annotation>
         <xs:documentation>A  person  or  organization  owning  or  managing  rights  over  the  information
resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:RightsHolder</annotations:ID>
            <annotations:Label>RightsHolder</annotations:Label>
            <annotations:ShortDescription>A person or organization owning or managing rights over the information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Rights</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
```

```
   <!-- End of Rights Group -->
   <xs:element name="Source" type="s5636:SimpleLiteralType" substitutionGroup="dcterms:source" nillable="true">
      <xs:annotation>
         <xs:documentation>Reference to an information resource from which the present information resource is
derived.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Source</annotations:ID>
            <annotations:Label>Source</annotations:Label>
            <annotations:ShortDescription>Reference to an information resource from which the present information
resource is derived.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- Subject Group -->
   <xs:element      name="Subject"      type="s5636:SimpleLiteralType"      substitutionGroup="dcterms:subject"
nillable="true">
      <xs:annotation>
         <xs:documentation>The topic of the content of the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Subject</annotations:ID>
            <annotations:Label>Subject</annotations:Label>
            <annotations:ShortDescription>The     topic     of     the     content     of     the     information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Subject</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="Keyword" type="s5636:CodeType" substitutionGroup="dc:subject" nillable="true">
      <xs:annotation>
         <xs:documentation>A word or term used to describe, as specific as possible, the subject matter of the
information resource.</xs:documentation>
         <xs:appinfo>
```

```
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Keyword</annotations:ID>
            <annotations:Label>Keyword</annotations:Label>
            <annotations:ShortDescription>A word or term used to describe, as specific as possible, the subject
matter of the information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Subject</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="SubjectCategory" type="s5636:CodeType" substitutionGroup="dc:subject" nillable="true">
      <xs:annotation>
         <xs:documentation>The subjectCategory specifies a coded value to categorize the information resource
along a highly controlled taxonomy or list.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:SubjectCategory</annotations:ID>
            <annotations:Label>SubjectCategory</annotations:Label>
            <annotations:ShortDescription>The subjectCategory specifies a coded value to categorize the
information resource along a highly controlled taxonomy or list.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Subject</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Subject Group -->
   <!-- Title Group -->
   <xs:element name="Title" type="s5636:SimpleLiteralType" substitutionGroup="dcterms:title" nillable="true">
      <xs:annotation>
         <xs:documentation>The title is the official name of an information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:AlternativeTitle</annotations:ID>
            <annotations:Label>AlternativeTitle</annotations:Label>
            <annotations:ShortDescription>The title is the official name of an information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
```

```
            <annotations:DataStructure>Metadata:Common:Title</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="AlternativeTitle" type="s5636:SimpleLiteralType" substitutionGroup="dcterms:alternative"
nillable="true">
      <xs:annotation>
         <xs:documentation>Any form of the title used as a substitute or alternative to the formal title of the
information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:AlternativeTitle</annotations:ID>
            <annotations:Label>AlternativeTitle</annotations:Label>
            <annotations:ShortDescription>Any form of the title used as a substitute or alternative to the formal
title of the information resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Title</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="Subtitle" type="s5636:SimpleLiteralType" substitutionGroup="dc:title" nillable="true">
      <xs:annotation>
         <xs:documentation>Any subtitle of an information resource that is associated with the formal title (or
a part thereof)</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Subtitle</annotations:ID>
            <annotations:Label>Subtitle</annotations:Label>
            <annotations:ShortDescription>Any subtitle of an information resource that is associated with the
formal title (or a part thereof).</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common:Title</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Title Group -->
   <xs:element name="Type" type="s5636:DCMITypeType" substitutionGroup="dcterms:type" nillable="true">
```

```
      <xs:annotation>
         <xs:documentation>The nature or genre of the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Type</annotations:ID>
            <annotations:Label>Type</annotations:Label>
            <annotations:ShortDescription>The nature or genre of the information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Common</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Common Layer -->
   <!-- Information Lifecycle Support Layer -->
   <!-- Records Group -->
   <xs:element name="RecordsDisposition" type="s5636:CodeType" substitutionGroup="dc:any" nillable="true">
      <xs:annotation>
         <xs:documentation>Information about the disposal of an information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:RecordsDisposition</annotations:ID>
            <annotations:Label>RecordsDisposition</annotations:Label>
            <annotations:ShortDescription>Information about the disposal of an information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:InformationLifecycleSupport:Records</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="RecordsHold" type="s5636:BoolType" substitutionGroup="dc:any" nillable="true">
      <xs:annotation>
         <xs:documentation>Indicator for a hold on an information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:RecordsHold</annotations:ID>
            <annotations:Label>RecordsHold</annotations:Label>
            <annotations:ShortDescription>Indicator for a hold on an information
```

```
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:InformationLifecycleSupport:Records</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Records Group -->
   <xs:element name="Status" type="s5636:CodeType" substitutionGroup="dc:any" nillable="true">
      <xs:annotation>
         <xs:documentation>The current status of an information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:v</annotations:ID>
            <annotations:Label>Status</annotations:Label>
            <annotations:ShortDescription>The       current       status       of       an       information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:InformationLifecycleSupport</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="UpdatingFrequency" type="s5636:CodeType" substitutionGroup="dc:any" nillable="true">
      <xs:annotation>
         <xs:documentation>The interval (or frequency) of updates to the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:UpdatingFrequency</annotations:ID>
            <annotations:Label>UpdatingFrequency</annotations:Label>
            <annotations:ShortDescription>The  interval  (or  frequency)  of  updates  to  the  information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:InformationLifecycleSupport</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="Version" type="s5636:SimpleLiteralType" substitutionGroup="dc:any" nillable="true">
```

```
      <xs:annotation>
         <xs:documentation>The version of the information resource.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:elements:Version</annotations:ID>
            <annotations:Label>Version</annotations:Label>
            <annotations:ShortDescription>The           version           of           the           information
resource.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:InformationLifecycleSupport</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <!-- End of Information Lifecycle Support Layer -->
   <!-- Attributes -->
   <xs:attribute name="type" type="xs:string">
      <xs:annotation>
         <xs:documentation>The type of a Point of Contact</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:attributes:type</annotations:ID>
            <annotations:Label>type</annotations:Label>
            <annotations:ShortDescription>The type of a Point Of Contact.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Attributes</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:attribute>
   <xs:attribute name="affiliation" type="xs:string">
      <xs:annotation>
         <xs:documentation>The affiliation of a Point of Contact</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:attributes:affiliation</annotations:ID>
            <annotations:Label>type</annotations:Label>
            <annotations:ShortDescription>The affialiation of a Point Of Contact.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
```

```
         <annotations:DataStructure>Metadata:Attributes</annotations:DataStructure>
      </xs:appinfo>
   </xs:annotation>
</xs:attribute>
<xs:attribute name="address" type="xs:string">
   <xs:annotation>
      <xs:documentation>The address of a Point of Contact.</xs:documentation>
      <xs:appinfo>
         <annotations:ID>urn:nato:stanag:5636:A:1:attributes:address</annotations:ID>
         <annotations:Label>address</annotations:Label>
         <annotations:ShortDescription>The address of a Point Of Contact.</annotations:ShortDescription>
         <annotations:Version>A:1</annotations:Version>
         <annotations:Usage/>
         <annotations:DataStructure>Metadata:Attributes</annotations:DataStructure>
      </xs:appinfo>
   </xs:annotation>
</xs:attribute>
<xs:attribute name="email" type="xs:string">
   <xs:annotation>
      <xs:documentation>The email address of a Point of Contact.</xs:documentation>
      <xs:appinfo>
         <annotations:ID>urn:nato:stanag:5636:A:1:attributes:email</annotations:ID>
         <annotations:Label>email</annotations:Label>
         <annotations:ShortDescription>The email address of a Point Of Contact.</annotations:ShortDescription>
         <annotations:Version>A:1</annotations:Version>
         <annotations:Usage/>
         <annotations:DataStructure>Metadata:Attributes</annotations:DataStructure>
      </xs:appinfo>
   </xs:annotation>
</xs:attribute>
<xs:attribute name="phone" type="xs:string">
   <xs:annotation>
      <xs:documentation>The telephone number of a Point of Contact.</xs:documentation>
      <xs:appinfo>
         <annotations:ID>urn:nato:stanag:5636:A:1:attributes:phone</annotations:ID>
         <annotations:Label>phone</annotations:Label>
         <annotations:ShortDescription>The       telephone       number       of       a       Point       Of
```

```
Contact.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Attributes</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:attribute>
   <xs:attribute name="qualifier" type="xs:string">
      <xs:annotation>
         <xs:documentation>The qualifier of an Extent.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:attributes:qualifiuer</annotations:ID>
            <annotations:Label>qualifier</annotations:Label>
            <annotations:ShortDescription>The qualifier of an Extent.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Metadata:Attributes</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:attribute>
   <xs:attribute name="element" type="xs:QName">
      <xs:annotation>
         <xs:documentation>The name of the corresponding NCMS metadata element.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:attributes:element</annotations:ID>
            <annotations:Label>element</annotations:Label>
            <annotations:ShortDescription>The     name     of     the     corresponding     NCMS     metadata
element.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage>Used on a STANAG 4778 Metadata or MetadataReference element to indicate the
corresponding   NCMS   metadata   element.   Use   this   attribute   when   non-NCMS   metadata   can   be   re-
used.</annotations:Usage>
            <annotations:DataStructure>Binding:Attributes</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:attribute>
   <!-- End of attributes -->
```

```
   <!-- ComplexTypes -->
   <xs:complexType name="POCType">
      <xs:annotation>
         <xs:documentation>Point of Contact information.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:types:POC</annotations:ID>
            <annotations:Label>POCType</annotations:Label>
            <annotations:ShortDescription>A       data       type       for       Point       of       Contact
information.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>DataType</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:complexContent>
         <xs:extension base="s5636:SimpleLiteralType">
            <xs:attribute ref="type" use="required"/>
            <xs:attribute ref="affiliation" use="optional"/>
            <xs:attribute ref="address" use="optional"/>
            <xs:attribute ref="email" use="optional"/>
            <xs:attribute ref="phone" use="optional"/>
            <xs:attribute ref="cli:codeListColumnName" use="optional"/>
            <xs:attribute ref="cli:codeListConstrainingIndicator" use="optional"/>
            <xs:attribute ref="cli:codeListURI" use="optional"/>
         </xs:extension>
         <!-- NCDF Code List attributes -->
         <!-- We add attributes rather than use a DCSV (like DCMI-Point) -->
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="CodeType">
      <xs:annotation>
         <xs:documentation>Code-based enumerated list</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:types:Code</annotations:ID>
            <annotations:Label>CodeType</annotations:Label>
            <annotations:ShortDescription>A data type for a Code</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
```

```
            <annotations:Usage/>
            <annotations:DataStructure>DataType</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:complexContent>
         <xs:extension base="s5636:SimpleLiteralType">
            <xs:attribute ref="cli:codeListColumnName" use="optional"/>
            <xs:attribute ref="cli:codeListConstrainingIndicator" use="optional"/>
            <xs:attribute ref="cli:codeListURI" use="required"/>
         </xs:extension>
         <!-- NCDF Code List attributes -->
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="ExtentType">
      <xs:annotation>
         <xs:documentation>Size or duration.</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:types:Extent</annotations:ID>
            <annotations:Label>ExtentType</annotations:Label>
            <annotations:ShortDescription>A data type for an Extent</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>DataType</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:complexContent>
         <xs:extension base="s5636:SimpleLiteralType">
            <xs:attribute ref="qualifier" use="required"/>
         </xs:extension>
         <!-- Qualifier for the extent. We do not choose to use an xsi:type to determine the qualifier, like we
do for geographicEncodingScheme.
              Perhaps we should align?-->
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="BoolType">
      <xs:annotation>
         <xs:documentation>Boolean</xs:documentation>
```

```
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:types:Bool</annotations:ID>
            <annotations:Label>BoolType</annotations:Label>
            <annotations:ShortDescription>A data type for a Bool</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>DataType</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:simpleContent>
         <xs:restriction base="s5636:SimpleLiteralType">
            <xs:simpleType>
               <xs:annotation>
                  <xs:documentation>Anonymous Bool for restriction</xs:documentation>
                  <xs:appinfo>
                     <annotations:ID>urn:nato:stanag:5636:A:1:types:AnonymousBool</annotations:ID>
                     <annotations:Label>AnonymousBool</annotations:Label>
                     <annotations:ShortDescription>A       data       type       for       an       anonymous
Bool</annotations:ShortDescription>
                     <annotations:Version>A:1</annotations:Version>
                     <annotations:Usage/>
                     <annotations:DataStructure>DataType</annotations:DataStructure>
                  </xs:appinfo>
               </xs:annotation>
               <xs:restriction base="xs:boolean"/>
            </xs:simpleType>
            <xs:attribute ref="xml:lang" use="prohibited"/>
         </xs:restriction>
      </xs:simpleContent>
   </xs:complexType>
   <!-- geographic reference types -->
   <!-- dcterms:Point -->
   <!-- dcterms:Box -->
   <xs:complexType name="UTMType">
      <xs:annotation>
         <xs:documentation>Universal Transverse Mercator Type</xs:documentation>
         <xs:appinfo>
```

```
            <annotations:ID>urn:nato:stanag:5636:A:1:types:UTM</annotations:ID>
            <annotations:Label>UTMType</annotations:Label>
            <annotations:ShortDescription>A data type for Universal Transverse Mercator
information.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>DataType</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:complexContent>
         <xs:extension base="s5636:SimpleLiteralType"/>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="SimpleLiteralType">
      <xs:annotation>
         <xs:documentation>Simple Literal Type</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:types:SimpleLiteralType</annotations:ID>
            <annotations:Label>SimpleLiteralType</annotations:Label>
            <annotations:ShortDescription>A data type for simple literals that allows @xml:id and any other
attributes.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>DataType</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:complexContent>
         <xs:extension base="dc:SimpleLiteral">
            <xs:attribute ref="xml:id" use="optional"/>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>
   <xs:complexType name="W3CDTFType">
      <xs:annotation>
         <xs:documentation>W3CDTFType</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:types:W3CDTFType</annotations:ID>
```

```
            <annotations:Label>W3CDTFType</annotations:Label>
            <annotations:ShortDescription>A data type for W3C date time forma that allows @xml:id and any other
attributes.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>DataType</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:simpleContent>
         <xs:extension base="dcterms:W3CDTF">
            <xs:attribute ref="xml:id" use="optional"/>
         </xs:extension>
      </xs:simpleContent>
   </xs:complexType>
   <xs:complexType name="DCMITypeType">
      <xs:annotation>
         <xs:documentation>DCMITypeType</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:types:DCMITypeType</annotations:ID>
            <annotations:Label>DCMITypeType</annotations:Label>
            <annotations:ShortDescription>A data type for DCMIType that allows @xml:id and any other
attributes.</annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>DataType</annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:simpleContent>
         <xs:extension base="dcterms:DCMIType">
            <xs:attribute ref="xml:id" use="optional"/>
         </xs:extension>
      </xs:simpleContent>
   </xs:complexType>
   <!-- End of ComplexTypes -->
</xs:schema>
```

Appendix 2 METADATA BINDING

C-2.1 Introduction

The NATO Core Metadata Specification identifies a metadata element that is specific to particular data object. The metadataConfidentialityLabel defines “the confidentiality label assigned to the metadata set associated with the resource” (see 3.1.2), and so implicitly binds the confidentiality label to the metadata, without explicitly identifying which metadata.

For XML encoded metadata, the association of metadata elements with a resource is defined by STANAG 4778 – “Metadata Binding Mechanism”. STANAG 4778 describes a metadata binding mechanism to bind (or associate) metadata with arbitrary, finite, data objects.

In order to provide a consistent, and explicit, approach to binding metadata to data objects, this Annex does not define an metadataConfidentialityLabel XML element, but rather uses the ADatP-4778 metadata binding mechanism, and the existing originatorConfidentialityLabel XML element, to “assign” a confidentiality label to the metadata.

This approach also allows other NCMS elements (for example, creator, dateCreated) to be associated with the metadata that is associated with a resource (though this is beyond the scope of this specification).

In order to ensure a consistent approach to the binding of metadata to a metadata (data object), ADatP-4778 binding profile is defined which describes how the binding is created and where it is to be located.

This binding profile is included in this Appendix as a normative part of ADatP-5636.

Note that, ADatP-4778 Standard Related Document (ADatP-4778.2), “Profiles for Binding Binding to a Data Object contains a set binding profiles for other data objects, but is not yet published. This binding profile follows the format defined in that SRD.

C-2.2 Binding Data Object Binding Profile

C-2.2.1 Introduction

A Binding Data Object (BDO) defines the binding of metadata to a data object. The metadata contained within the BDO is bound to the data, or data references that are contained within the BDO. The BDO itself is excluded (either implicitly or explicitly) from the data object to which the metadata is being bound. Specifically, for

- an encapsulating binding, the metadata is bound to the data that is within the BDO
- a detached binding the metadata is bound to the data referenced by the BDO

- an embedded binding, the BDO is explicitly excluded (for example, see Reference [2], section Transforms).

As a data object (for example as a metadata card), the BDO may need to have metadata bound to it. This profile provides an approach to the binding of metadata to BDO, and in turn binds metadata to the metadata contained within the BDO.

C-2.2.2 Identification

The profile for BDO is uniquely identified by the Canonical Identifier shown in the table below:

Type	Identifier
Canonical Identifier	urn:nato:stanag:5636:A:1:bindingprofile:bdo
Version Identifier	urn:nato:stanag:5636:A:1:bindingprofile:bdo:1:0

It is recognized that this profile may evolve during its review cycle. For example, a review might identify:

- changes to the base XMPP standard
- improvements to the existing profiles based upon operational feedback

Therefore this version of the profile is uniquely identified by the Version Identifier shown in Table 4-1.

Subsequent versions of this profile will maintain the same Canonical Identifier, but define a new Version Identifier.

C-2.2.3 Standards

[1] ADatP-4778, Metadata Binding Mechanism, Brussels, Belgium
[2] ADatP-4778.2 Profiles for Binding Metadata to a Data Object, Brussels, Belgium (Draft)

C-2.2.4 Notational Conventions

- The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [IETF RFC 2119, 1997].
- Words in italics indicate terms derived from Reference [1] and this profile.

C-2.2.5 BDO Structure

The BDO Structure (Reference [1]) contains an mb:BindingInformation element which allows for arbitrary extensions to be included within the BDO. The extensions must be from a namespace other than the mb namespace, and so an mb:BindingInformation information element cannot be directly included here.

In order to resolve this issue, this profile defines an element (BindingInformationContainer) in the ADatP-5636 namespace (s5636bp=urn:nato:stanag:5636:A:1:bindingprofile:bdo) which contains a single child mb:BindingInformation element.

The Binding Information is thus be “wrapped” in the s5636:BindingInformationContainer element which can be included within the parent mb:BindingInformation element.

As such, the Binding Information SHALL be represented as an Embedded BDO.

A BDO SHALL be embedded within the parent BDO as a child mb:BindingInformation of the s5636:BindingInformationContainer element of the mb:BindingInformation element. (XPath: /mb:BindingInformation/s5636bp:BindingInformationContainer/ mb:BindingInformation).

A BDO SHALL NOT be embedded in any other location within the parent BDO.

Multiple BDOs MAY be embedded as child mb:BindingInformation elements of a single s5636:BindingInformationContainer element.

It is RECOMMENDED that metadata is contained within the Metadata child element of the MetadataBinding element; not referenced with the use of the MetadataReference element.

One or more DataReference elements SHALL be present in a MetadataBinding element containing a URI attribute in order to locate the data (and subsets thereof) that is contained in the parent mb:BindingInformation element.

An example of an BDO embedded in a BDO that illustrates the binding of the metadata to a data object (the parent mb:BindingInformation element) is shown below. The example, shows that the image.gif is ACME SENSITIVE, but the binding itself, including the metadata, is ACME UNCLASSIFIED. This example uses Confidentiality Metadata Labels (Reference [1]) as example metadata.

```
<?xml version="1.0" encoding="UTF-8"?>
<s4778:BindingInformation xmlns:xsd=http://www.w3.org/2001/XMLSchema
xml:id="#bdo-60ea0291-4558-6002-c156-3091371b680c"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:s4774="urn:nato:stanag:4774:confidentialitymetadatalabel:1:0”
xmlns:s4778="urn:nato:stanag:4778:bindinginformation:1:0"
xmlns:s5636bp="urn:nato:stanag:5636:A:1:bindingprofile:bdo ">
  <s4778:MetadataBindingContainer>
    <s4778:MetadataBinding>
      <s4778:Metadata>
        <s4774:originatorConfidentialityLabel>
          <s4774:ConfidentialityInformation>
            <s4774:PolicyIdentifier>ACME</s4774:PolicyIdentifier>
```

```
            <s4774:Classification>SENSITIVE</s4774:Classification>
          </s4774:ConfidentialityInformation>
          <s4774:CreationDateTime>2020-04-07T12:30:00Z
          </s4774:CreationDateTime>
        </s4774:originatorConfidentialityLabel>
      </s:4778Metadata>
      <s4778:DataReference URI="image.gif" />
    </s4778:MetadataBinding>
  </s4778:MetadataBindingContainer>
  <s5636bp:BindingInformationContainer>
    <s4778:BindingInformation>
      <s4778:MetadataBindingContainer>
        <s4778:MetadataBinding>
          <s4778:Metadata>
            <s4774:originatorConfidentialityLabel>
              <s4774:ConfidentialityInformation>
                <s4774:PolicyIdentifier>ACME</s4774:PolicyIdentifier>
                <s4774:Classification>RESTRICTED</s4774:Classification>
              </s4774:ConfidentialityInformation>
              <s4774:CreationDateTime>2020-04-07T12:30:00Z
              </s4774:CreationDateTime>
            </s4774:originatorConfidentialityLabel>
          </s4778:Metadata>
          <s4778:DataReference URI=""/>
        </s4778:MetadataBinding>
      </s4778:MetadataBindingContainer>
    </s4778:BindingInformation>
  </s5636bp:BindingInformationContainer>
</s4778:BindingInformation>
```

C-2.2.6 Cryptographic Artefacts Profile

The Cryptographic Artefacts binding profile (Chapter 2 of AdatP-4778.2) SHALL be adhered to for the use cases that cryptographic bindings are required to provide a higher level of integrity protection, authenticity and non-repudiation of the binding specified in this profile.

Unless otherwise stated, all statements that apply to the Cryptographic Artefacts binding profile (Chapter 2 ADatP-4778.2) also apply to this profile for generating and validating cryptographic bindings.

It is RECOMMENDED that the requirements specified in Cryptographic Artefacts binding profile (Chapter 2 of ADatP- 4778.2) URI Schemes be adhered to.

C-2.2.7 XML Schema

The following NCDF Reference Schema defines the BindingInformationContainer element that is used by the BDO binding profile.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:s4774="urn:nato:stanag:4774:confidentialitymetadatalabel:1:0"
xmlns:s4778="urn:nato:stanag:4778:bindinginformation:1:0"
xmlns:s4778-ext="urn:nato:stanag:4778:bindinginformation:extensions:1:0"
xmlns:ct="urn:nato:ncdf:release:conformance-targets:1:0"
xmlns:cli="urn:nato:ncdf:specification:code-lists:1:0:code-lists-
instance"
xmlns:structures="urn:nato:ncdf:release:structures:1:0"
xmlns="urn:nato:stanag:5636:A:1:elements"
xmlns:s5636="urn:nato:stanag:5636:A:1:elements"
xmlns:s5636bp="urn:nato:stanag:5636:A:1:bindingprofile:bdo"
xmlns:annotations="urn:nato:stf:annotations"
targetNamespace="urn:nato:stanag:5636:A:1:bindingprofile:bdo"
elementFormDefault="qualified" attributeFormDefault="unqualified"
version="RD2" ct:conformanceTargets="urn:nato:ncdf:specification:xml-
naming-and-design-rules:1:0:referenceschemadocument">
   <xs:annotation>
      <xs:documentation>
       STANAG 5636 BDO Binding Profile XML Schema
       XML Schema for urn:nato:stanag:5636:A:1:bindingprofile:bdo
namespace.

       Created 20-03-2020

       This schema declares XML elements the BindingInformationContainer
XML element that is used by the STANAG 4778 Binding Profile for BDO.

       The BDO Binding Profile embeds a STANAG 4778 BindingInformation
element (within a STANAG 4778 BindingInformation element (a Binding Data
Object, BDO), which allows the binding of metadata to a BDO, including
the metadata contained within the BDO.

      </xs:documentation>
      <xs:appinfo>
         <annotations:ID>urn:nato:stanag:5636:A:1:bindingprofile:bdo:
BindingInformationContainer
         </annotations:ID>
         <annotations:Label>NCMS STANAG 4778 BDO Binding Profile Container
         </annotations:Label>
         <annotations:ShortDescription>XML Elements to support the STANAG
4778 binding of metadata to metadata.
         </annotations:ShortDescription>
         <annotations:Version>A:1</annotations:Version>
         <annotations:Usage/>
         <annotations:DataStructure>Schema</annotations:DataStructure>
      </xs:appinfo>
   </xs:annotation>
```

```
   <xs:annotation>
      <xs:documentation>STANAG 4778 Binding Information</xs:documentation>
      <xs:appinfo source="urn:nato:stanag:4778:bindinginformation:1:0">
         <s4778:BindingInformation s4778-
ext:profile="urn:nato:stanag:4778:profile:xml:schema:1:0">
            <s4778:MetadataBindingContainer>
               <s4778:MetadataBinding>
                  <s4778:Metadata>
                     <s4774:originatorConfidentialityLabel>
                        <s4774:ConfidentialityInformation>
                           <s4774:PolicyIdentifier>NATO
                           </s4774:PolicyIdentifier>
                           <s4774:Classification>RESTRICTED
                           </s4774:Classification>
                           <s4774:Category Type="PERMISSIVE"
                        TagName="Context">
                              <s4774:GenericValue>NATO</s4774:GenericValue>
                           </s4774:Category>
                        </s4774:ConfidentialityInformation>
                        <s4774:OriginatorID
IDType="uniformResourceIdentifier">https://nmrr.ncia.nato.int/rest/doc/NA
TO%20Interim/IA/Security%20Policy/spif2gc.xsl
                        </s4774:OriginatorID>
                        <s4774:CreationDateTime>2020-02-08T16:11:43Z
                        </s4774:CreationDateTime>
                     </s4774:originatorConfidentialityLabel>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Subject>XML Elements to support the STANAG
4778 binding of metadata to metadata.
                     </s5636:Subject>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Title>NCMS STANAG 4778 BDO Binding Profile
Container
                     </s5636:Title>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Creator type="organization">NATO C&amp;amp;I
Agency
                     </s5636:Creator>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Publisher type="organization">NATO C&amp;amp;I
Agency
                     </s5636:Publisher>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Identifier>urn:nato:stanag:5636:A:1:elements
                     </s5636:Identifier>
                  </s4778:Metadata>
                  <s4778:Metadata>
                     <s5636:Created>2020-03-13T08:49:56+01:00
                     </s5636:Created>
                  </s4778:Metadata>
                  <s4778:DataReference URI=""/>
               </s4778:MetadataBinding>
```

```
            </s4778:MetadataBindingContainer>
         </s4778:BindingInformation>
      </xs:appinfo>
   </xs:annotation>

   <xs:import
namespace="urn:nato:stanag:4774:confidentialitymetadatalabel:1:0"
schemaLocation="nl-cl.xsd"/>
   <xs:import namespace="urn:nato:stanag:4778:bindinginformation:1:0"
schemaLocation="nl-mb.xsd"/>
   <xs:import namespace="urn:nato:ncdf:specification:code-lists:1:0:code-
lists-instance" schemaLocation="code-list-instance.xsd"/>
   <xs:import namespace="urn:nato:ncdf:release:structures:1:0"
schemaLocation="structures.xsd"/>

   <!-- STANAG 4778 BDO Binding Profile -->
   <xs:element name="BindingInformationContainer"
type="s5636bp:BindingInformationContainerType" nillable="true">
      <xs:annotation>
         <xs:documentation>The container for a holding a
BindingInformation within a BindingInformation</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:bindingprofile:bdo:
BindingInformationContainer
            </annotations:ID>
            <annotations:Label>BindingInformationContainer
            </annotations:Label>
            <annotations:ShortDescription>The container for a holding a
BindingInformation within a BindingInforation.
            </annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>Container
            </annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
   </xs:element>
   <xs:element name="BindingInformationContainerAugmentationPoint"
   abstract="true">
<xs:annotation>
         <xs:documentation>Binding Information Container Augmentation
Point</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:bindingprofile:bdo:
BindingInformationContainerAugmentationPoint
            </annotations:ID>
   <annotations:Label>BindingInformationContainerAugmentationPoint
            </annotations:Label>
            <annotations:ShortDescription>A data type to allow a
BindingInformationContainer to be extended, if required, by an extension
schema.
            </annotations:ShortDescription>
         <annotations:Version>A:1</annotations:Version>
         <annotations:Usage/>
            <annotations:DataStructure>AugmentationPoint
            </annotations:DataStructure>
         </xs:appinfo>
```

```
      </xs:annotation>
   </xs:element>
   <xs:complexType name="BindingInformationContainerType">
      <xs:annotation>
         <xs:documentation>Binding Information Container
Type</xs:documentation>
         <xs:appinfo>
            <annotations:ID>urn:nato:stanag:5636:A:1:bindingprofile:bdo:
BindingInformationContainerType
            </annotations:ID>
            <annotations:Label>BindingInformationContainerType
            </annotations:Label>
            <annotations:ShortDescription>A data type to support the
binding of metadata to a STANAG 4778 BindingInformation.
            </annotations:ShortDescription>
            <annotations:Version>A:1</annotations:Version>
            <annotations:Usage/>
            <annotations:DataStructure>DataType
            </annotations:DataStructure>
         </xs:appinfo>
      </xs:annotation>
      <xs:complexContent>
         <xs:extension base="structures:ObjectType">
            <xs:sequence>
                  <xs:element minOccurs="1" maxOccurs="1"
                  ref="s4778:BindingInformation" />
               <xs:element minOccurs="0" maxOccurs="unbounded"
              ref="s5636bp:BindingInformationContainerAugmentationPoint"/>
            </xs:sequence>
         </xs:extension>
      </xs:complexContent>
   </xs:complexType>

</xs:schema>
```

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ADatP-5636(A)(1)