

Descriptive Metadata Standard

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Information and Technology Division



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Signature: <signed>

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1 Background

1.1 Purpose

This document describes a standard City of Toronto Descriptive Metadata Element Set for describing resources such as documents or services. The goal is to improve the discovery, visibility, accessibility and interoperability of electronic information and services.

The short and traditional definition of metadata is “data about data”. A better description would be “information associated with resources and services which enables users to be aware of the existence, characteristics and discovery of these objects.”

This standard draws upon the following research, guidelines, standards, efforts and publications:

- Dublin Core Metadata Initiative;
- World Wide Web Consortium;
- The Australian Government Locator Service;
- Treasury Board of Canada, Secretariat;
- The New Zealand Government Locator Service.
- Province of Ontario

1.2 Application

This Standard applies to all City of Toronto Divisions, City employees, volunteers and contract employees hired by the City of Toronto.

This Standard does not apply to Elected Officials, Accountability Officers or City Agencies and corporations. The City of Toronto encourages City Agencies and Corporations to review, adopt or update this Standard appropriate to their business circumstances.

All City information assets are subject to this standard, regardless of their use or physical location.

One of the City’s goals is to make its resources and services available to and easily accessible by its citizens, business partners and staff. A foundation in achieving this goal is to consistently describe all resources using this metadata standard. This goal can be achieved by:

- Enabling internal search engines to search metadata profiles;
- Making the metadata and their domains available to the searcher.

Implementation of this standard will be the basis for access to all online and offline resources for external and internal applications. Accurate and consistent capture of metadata makes resources and services more accessible by making searches more precise, allowing for better understanding of the resource when discovered. It will also provide a means of better managing these resources.

1.3 Definitions

- **CoT:** City of Toronto

- **Dublin Core:** The Dublin Core Metadata Initiative, (<http://www.dublincore.org>) is a global open forum engaged in the development of metadata standards that support a broad range of purposes and business models.
- **Element:** A formally defined term which is used to describe attributes and properties of a resource. For example, Title, Publisher, or Subject.
- **Refinement:** A property of a resource, which shares the meaning of a particular **Element**, but with narrower semantics.
- **ISO:** International Organization for Standards. <http://www.iso.ch/iso/en/ISOOnline.frontpage>
- **Metadata:** Information associated with resources which enables users to be aware of their existence and characteristics.
- **MIME:** Multipurpose Internet Mail Extensions (Internet Media Types).
- **Resource:** As described in the Dublin Core Metadata Initiative Glossary “A resource is anything that has identity. Familiar examples include an electronic document, an image, a service (e.g., “today’s weather report for Toronto”), and a collection of other resources. Not all resources are network “retrievable”; e.g., human beings, corporations, and bound books and paper documents in a library can also be considered resources. “. Electronic resources are known as online resources, resources in physical format such as papers or books are known as offline resources.
- **RFC:** A Request for Comment (RFC) is the process of establishing a standard on the Internet. The Internet Engineering Task Force (IETF) facilitates discussion of the proposed standard on the Internet. Once approved, the standard receives a unique number which identifies it; e.g., RFC See <http://www.isi.edu/rfc-editor/> and <http://www.ietf.org/rfc.html>
- **URI:** Uniform Resource Identifiers – A pointer to a specific location on the Web.
- **World Wide Web Consortium:** Develops interoperable technologies to lead the Web to its full potential. World Wide Web Consortium is a forum for information, commerce, communication, and collective understanding. <http://www.w3c.org>

1.4 Standard Approval and Review Schedule

This Standard is reviewed annually.

1.5 Related Documents

Records Management Metadata Standard.

1.6 Format and Structure

The format used to describe the Descriptive Metadata Element Set follows the CEN Workshop Agreement 14855 for Dublin Core Application Profile Guidelines. This approach is used by Treasury Board of Canada, Secretariat to document the “Dublin Core Application Profile for Web Resource Discovery in the Government of Canada”.

The following attributes are used to identify, define, relate and constrain the terms for Dublin Core elements, refinements and encoding schemes and provides a legend for the definition of the metadata element set that follows.

Attributes	Attribute Description
Identification	
Name	A unique token assigned to the term
Label	A human-readable label assigned to the term
Defined by	An identifier of a namespace, pointer to a schema, or bibliographic reference for a document within which the term is defined
Term URI	A Uniform Resource Identifier used to identify the term
Definition	
Type of term	A grammatical category of the term (e.g. Element, Element Refinement, or Encoding Scheme)
Definition	A statement that represents the concept and essential nature of the term
Comment	Additional information about the term or its application
References	References to additional resources for further explanation and guidance for the application of the term
Relations	
Refined by	The described term is semantically refined by the referenced term
Refines	The described term semantically refines the referenced term
Has Encoding Scheme	The described term is qualified by the referenced Encoding Scheme
Encoding Scheme for	The Encoding Scheme qualifies the described term
Constraints	
Obligation	Indicates whether the term is required to always or sometimes be present (i.e., contain a value). Options are: <ul style="list-style-type: none"> • Mandatory – must always be present • Optional – may be present • Conditional – must be present under certain conditions
Condition	Describes the condition or conditions according to which a value shall be present
Datatype	Indicates the type of data that can be represented in the value of the term
Occurrence	Indicates any limit to the repeatability of the term

2 Descriptive Metadata Element Set

The attributes in the following tables serve to identify, define, relate or constrain each element in the Descriptive Metadata Element Set.

2.1 Audience

Attributes	Attribute Description
Identification	
Name	Audience
Label	Audience
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/audience
Definition	
Type of term	Element
Definition	The primary target audience for whom the resource is intended.
Comment	The target audience may be determined by the creator or publisher of the resource.
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	Under Development
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a value is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

2.2 Contributor

Attributes	Attribute Description
Identification	
Name	Contributor
Label	Contributor
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/contributor
Definition	
Type of term	Element
Definition	An entity, other than Creator, responsible for making contributions to the content of the resource

Comment	Examples of a Contributor include a person, their role or an organization.
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	CoT_ORG is used if the Contributor is a member of staff or a business unit within the City of Toronto.
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a value is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

2.3 Coverage

Attributes	Attribute Description
Identification	
Name	Coverage
Label	Coverage
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/coverage
Definition	
Type of term	Element
Definition	The extent or scope of the content of the resource.
Comment	Typically, coverage will include 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, and where appropriate, named places or time periods are used in preference to numeric identifiers such as sets of coordinates or date ranges. It is recommended that the Coverage refinements and not the element should be used for greater specificity.
References	
Relations	
Refined by	Spatial
Refined by	Temporal
Refined by	genotype
Refined by	geoAddress
Refined by	geoStreetName
Refined by	geoPostalCode
Refined by	geoWard
Refined by	geoFrmmMunicipality
Refined by	geoName

Refined by	geointentifier
Refines	
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.3.1 Spatial

Attributes	Attribute Description
Identification	
Name	Spatial
Label	Spatial
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/spatial
Definition	
Type of term	Element Refinement
Definition	Spatial characteristics of the intellectual content of the resource
Comment	Spatial characteristics can include a physical address or other elements from the City's One Address Repository or a jurisdiction representing an area of legal responsibility, such as the City of Toronto, Province of Ontario or the Government of Canada.
References	
Relations	
Refined by	
Refined by	
Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	
Obligation	Conditional – must be present when the resource has limited spatial coverage
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary.
Datatype	String
Occurrence	Repeatable

2.3.2 Temporal

Attributes	Attribute Description
Identification	
Name	Temporal
Label	Temporal

Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/temporal
Definition	
Type of term	Element Refinement
Definition	Temporal characteristics of the intellectual content of the resource
Comment	
References	
Relations	
Refined by	
Refined by	
Refines	Coverage
Has Encoding Scheme	W3CDTF
Has Encoding Scheme	DCMI Period
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary. The appropriate syntax scheme label must be included for dates.
Datatype	String
Datatype	Date or dateTime (for W3CDTF)
Occurrence	Repeatable

2.3.3 GeoType

Attributes	Attribute Description
Identification	
Name	genotype
Label	GeoType
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	Represents the type of geographic feature being referenced by Coverage. A component of a hierarchy of geographic features in the City's geospatial information environment.
Comment	
References	
Relations	
Refined by	
Refined by	
Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	

Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

2.3.4 GeoAddress

Attributes	Attribute Description
Identification	
Name	geoAddress
Label	GeoAddress
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	A valid municipal address stored in the City's One Address Repository.
Comment	
References	
Relations	
Refined by	
Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary.
Datatype	String
Occurrence	Repeatable

2.3.5 GeoStreetName

Attributes	Attribute Description
Identification	
Name	geoStreetName
Label	GeoStreetName
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	A municipal street name designation within the City of Toronto.
Comment	

References	
Relations	
Refined by	
Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary.
Datatype	String
Occurrence	Repeatable

2.3.6 GeoPostalCode

Attributes	Attribute Description
Identification	
Name	geoPostalCode
Label	GeoPostalCode
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	A valid Canada Post postal code associated with a municipal address.
Comment	
References	
Relations	
Refined by	
Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary.
Datatype	String
Occurrence	Repeatable

2.3.7 GeoWard

Attributes	Attribute Description
Identification	
Name	geoWard
Label	GeoWard

Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	A municipal ward designation within the City of Toronto.
Comment	
References	
Relations	
Refined by	
Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary.
Datatype	String
Occurrence	Repeatable

2.3.8 GeoFrmrMunicipality

Attributes	Attribute Description
Identification	
Name	geoFrmrMunicipality
Label	GeoFrmrMunicipality
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	A former municipal designation within the City of Toronto
Comment	
References	
Relations	
Refined by	
Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary.
Datatype	String
Occurrence	Repeatable

2.3.9 GeoName

Attributes	Attribute Description
Identification	
Name	geoName
Label	GeoName
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	The proper name of point/line/polygon geographic feature the associated geolidentifier represents
Comment	
References	
Relations	
Refined by	
Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary.
Datatype	String
Occurrence	Repeatable

2.3.10 GeoIdentifier

Attributes	Attribute Description
Identification	
Name	geolidentifier
Label	Geolidentifier
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	A code that when combined with geotype in a compound key represents the uniquely identifiable geographic expression of the content object found in the 'real world'.
Comment	
References	
Relations	
Refined by	

Refines	Coverage
Has Encoding Scheme	CoT_Geospatial
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary.
Datatype	String
Occurrence	Repeatable

2.4 Creator

Attributes	Attribute Description
Identification	
Name	Creator
Label	Creator
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/creator
Definition	
Type of term	Element
Definition	An entity primarily responsible for making the content of the resource.
Comment	Examples of Creator include a person, their role or an organization.
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	CoT_ORG is used if the Creator is a member of staff or a business unit within the City of Toronto.
Encoding Scheme for	
Constraints	
Obligation	Mandatory
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary
Datatype	String
Occurrence	Not Repeatable

2.5 Date

Attributes	Attribute Description
Identification	
Name	Date
Label	Date
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/date

Definition	
Type of term	Element
Definition	A date associated with an event in the lifecycle of the resource.
Comment	Typically, Date will be associated with the creation or availability of the resource.
References	
Relations	
Refined by	Expiry
Refined by	Available
Refined by	Created
Refined by	Issued
Refined by	Modified
Refined by	Valid
Refined by	Reviewed
Refines	
Has Encoding Scheme	ISO 8601
Encoding Scheme for	
Constraints	
Obligation	
Condition	
Datatype	Date or dateTime
Occurrence	Not Repeatable

2.5.1 Expiry

Attributes	Attribute Description
Identification	
Name	Expiry
Label	Expiry
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	The date that the resource will no longer be available on the City's web sites.
Comment	
References	
Relations	
Refined by	
Refines	Date
Has Encoding Scheme	ISO 8601.
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate syntax scheme label must be included.
Datatype	Date or dateTime
Occurrence	Not Repeatable

2.5.2 Available

Attributes	Attribute Description
Identification	
Name	Available
Label	Available
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/available
Definition	
Type of term	Element Refinement
Definition	Date that the resource will become or did become available.
Comment	Best practice is to provide a date range. Ensure the start and end dates are each clearly identified. The Available start date will always be the same as the Issued date.
References	
Relations	
Refined by	
Refines	Date
Has Encoding Scheme	ISO 8601.
Has Encoding Scheme	DCMI Period
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate syntax scheme label must be included.
Datatype	Date or dateTime
Occurrence	Repeatable

2.5.3 Created

Attributes	Attribute Description
Identification	
Name	Created
Label	Created
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/created
Definition	
Type of term	Element Refinement
Definition	Date of creation of the resource..
Comment	The Created refinement indicates the date the content of the resource was completed for its intended purpose. If the creation date is not known, this refinement should NOT be used.
References	
Relations	

Refined by	
Refines	Date
Has Encoding Scheme	ISO 8601.
Encoding Scheme for	
Constraints	
Obligation	Mandatory
Condition	The appropriate syntax scheme label must be included.
Datatype	Date or dateTime
Occurrence	Not repeatable

2.5.4 Issued

Attributes	Attribute Description
Identification	
Name	Issued
Label	Issued
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/issued
Definition	
Type of term	Element Refinement
Definition	Date of formal issuance (e.g., publication) of the resource.
Comment	
References	
Relations	
Refined by	
Refines	Date
Has Encoding Scheme	ISO 8601.
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate syntax scheme label must be included.
Datatype	Date or dateTime
Occurrence	Not repeatable

2.5.5 Modified

Attributes	Attribute Description
Identification	
Name	Modified
Label	Modified
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/modified
Definition	

Type of term	Element Refinement
Definition	Date that the resource was changed.
Comment	
References	
Relations	
Refined by	
Refines	Date
Has Encoding Scheme	ISO 8601
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate syntax scheme label must be included.
Datatype	Date or dateTime
Occurrence	Not repeatable

2.5.6 Valid

Attributes	Attribute Description
Identification	
Name	Valid
Label	Valid
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/valid
Definition	
Type of term	Element Refinement
Definition	Date (often a range) of validity of a resource.
Comment	Best practice is to provide a date range. Ensure the start and end dates are each clearly identified.
References	
Relations	
Refined by	
Refines	Date
Has Encoding Scheme	ISO 8601.
Has Encoding Scheme	DCMI Period
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate syntax scheme label must be included.
Datatype	Date or dateTime
Occurrence	Not repeatable

2.5.7 Reviewed

Attributes	Attribute Description
Identification	

Name	Reviewed
Label	Reviewed
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	Date the validity of a resource has been confirmed.
Comment	
References	
Relations	
Refined by	
Refines	Date
Has Encoding Scheme	ISO 8601.
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate syntax scheme label must be included.
Datatype	Date or dateTime
Occurrence	Repeatable

2.6 Description

Attributes	Attribute Description
Identification	
Name	Description
Label	Description
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/1.1/description
Definition	
Type of term	Element
Definition	A concise textual description of the content and/or purpose of the resource
Comment	
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Not repeatable

2.7 Format

Attributes	Attribute Description
Identification	
Name	Format
Label	Format
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/1.1/format
Definition	
Type of term	Element
Definition	The physical or digital manifestation of the resource.
Comment	Typically, Format may include the media-type or dimensions of the resource. Format may be used to identify the software, hardware, or other equipment needed to display or operate the resource. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [MIME] defining computer media formats).
References	
Relations	
Refined by	Extent
Refined by	Medium
Refines	
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary
Datatype	String
Occurrence	Not Repeatable

2.7.1 Extent

Attributes	Attribute Description
Identification	
Name	Extent
Label	Extent
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/extent
Definition	
Type of term	Element Refinement
Definition	The size, length or duration of the resource.
Comment	
References	

Relations	
Refined by	
Refines	Format
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.7.2 Medium

Attributes	Attribute Description
Identification	
Name	Medium
Label	Medium
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/medium
Definition	
Type of term	Element Refinement
Definition	Media type of the resource.
Comment	Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [MIME] defining computer media formats).
References	
Relations	
Refined by	
Refines	Format
Has Encoding Scheme	Under Development
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Not Repeatable

2.8 Identifier

Attributes	Attribute Description
Identification	
Name	Identifier
Label	Identifier
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/identifier

Definition	
Type of term	Element
Definition	An unambiguous reference to the resource within a given context
Comment	
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	<i>Uniform Resource Identifiers (URI): Generic Syntax</i> http://www.ietf.org/rfc/rfc2396.txt
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Not Repeatable

2.9 Language

Attributes	Attribute Description
Identification	
Name	Language
Label	Language
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/language
Definition	
Type of term	Element
Definition	The language of the intellectual content of the resource
Comment	
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	ISO 639 Part 1
Encoding Scheme for	
Constraints	
Obligation	Mandatory
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary
Datatype	String
Occurrence	Not Repeatable

2.10 Publisher

Attributes	Attribute Description
------------	-----------------------

Identification	
Name	Publisher
Label	Publisher
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/publisher
Definition	
Type of term	Element
Definition	An entity responsible for making the resource available.
Comment	Examples of Publisher include a person, their role or an organization.
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	CoT_ORG is used if the Publisher is a member of staff or a business unit within the City of Toronto.
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

2.11 Relation

Attributes	Attribute Description
Identification	
Name	Relation
Label	Relation
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/relation
Definition	
Type of term	Element
Definition	A reference to a related resource.
Comment	The Relation refinements and not the Relation element should be used.
References	
Relations	
Refined by	conformsTo
Refined by	hasFormat
Refined by	hasPart
Refined by	hasVersion
Refined by	isFormatOf
Refined by	isPartOf

Refined by	isReferencedBy
Refined by	isReplacedBy
Refined by	isRequiredBy
Refined by	isVersionOf
Refined by	References
Refined by	Replaces
Refined by	Requires
Refined by	hasTranslation
Refined by	isTranslationOf
Refines	
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.1 Conforms To

Attributes	Attribute Description
Identification	
Name	conformsTo
Label	Conforms To
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/conformsTo
Definition	
Type of term	Element Refinement
Definition	A reference to an established standard to which the resource conforms.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The Conforms To refinement is used only if conformance to a published standard is important for resource discovery in a business context.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.2 Has Format

Attributes	Attribute Description
Identification	
Name	hasFormat
Label	Has Format
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/hasFormat
Definition	
Type of term	Element Refinement
Definition	The described resource pre-existed the referenced resource, which is essentially the same intellectual content presented in another format.
Comment	<p>Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.</p> <p>The Has Format refinement should, whenever possible, be used in conjunction with the Is Format Of refinement on the referenced resource.</p> <p>Not to be confused with the Format element used for the resource being described. Content of the Has Format refinement is a reference to another resource, not a description of the format of another resource.</p>
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.3 Is Format Of

Attributes	Attribute Description
Identification	
Name	isFormatOf
Label	Is Format Of
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/isFormatOf
Definition	
Type of term	Element Refinement

Definition	The described resource is the same intellectual content of the referenced resource, but presented in another format.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The Is Format Of refinement should, whenever possible, be used in conjunction with the Has Format refinement on the referenced resource.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.4 Has Part

Attributes	Attribute Description
Identification	
Name	hasPart
Label	Has Part
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/hasPart
Definition	
Type of term	Element Refinement
Definition	The described resource includes the referenced resource either physically or logically.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. For web resources, the Has Part refinement may be used, for example, to relate sections of a large document that have been published separately. The Has Part refinement should, whenever possible, be used in conjunction with the Is Part Of refinement on the referenced resource.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	

Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.5 Is Part Of

Attributes	Attribute Description
Identification	
Name	isPartOf
Label	Is Part Of
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/isPartOf
Definition	
Type of term	Element Refinement
Definition	The described resource is a physical or logical part of the referenced resource.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The Is Part Of refinement should, whenever possible, be used in conjunction with the Has Part refinement on the referenced resource.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.6 Has Version

Attributes	Attribute Description
Identification	
Name	hasVersion
Label	Has Version
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/hasVersion
Definition	
Type of term	Element Refinement

Definition	The described resource has a version, edition, or adaptation, namely, the referenced resource.
Comment	<p>Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.</p> <p>The Has Version refinement may be used to reference previous editions of the described resource that are still available. If the referenced version supersedes the described resource, the Is Replaced By refinement should be used.</p> <p>The Has Version refinement should, whenever possible, be used in conjunction with the Is Version Of refinement on the referenced resource.</p> <p>Not to be confused with Has Format, used to reference resources with the same intellectual content presented in different formats.</p>
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.7 Is Version Of

Attributes	Attribute Description
Identification	
Name	isVersionOf
Label	Is Version Of
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/isVersionOf
Definition	
Type of term	Element Refinement
Definition	The described resource is a version, edition, or adaptation of the referenced resource. Changes in version imply substantive changes in content rather than differences in format.
Comment	<p>Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system.</p> <p>The Is Version Of refinement should, whenever possible, be used in conjunction with the Has Version refinement on the referenced resource.</p> <p>Not to be confused with Is Format Of, used to reference a pre-existing resource with the same intellectual content presented in a different format.</p>

References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.8 References

Attributes	Attribute Description
Identification	
Name	References
Label	References
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/references
Definition	
Type of term	Element Refinement
Definition	The described resource references, cites, or otherwise points to the referenced resource.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The References refinement should be used when there is a substantial dependency between the resources. The References refinement should, whenever possible, be used in conjunction with the Is Referenced By refinement on the referenced resource.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.9 Is Referenced By

Attributes	Attribute Description
Identification	
Name	isReferencedBy
Label	Is Referenced By
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/isReferencedBy
Definition	
Type of term	Element Refinement
Definition	The described resource is referenced, cited, or otherwise pointed to by the referenced resource.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The Is Referenced By refinement should be used when there is a substantial dependency between the resources. The Is Referenced By refinement should, whenever possible, be used in conjunction with the References refinement on the referenced resource.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.10 Replaces

Attributes	Attribute Description
Identification	
Name	Replaces
Label	Replaces
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/replaces
Definition	
Type of term	Element Refinement
Definition	The described resource supplants, displaces. Or supersedes the referenced resource.

Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The Replaces refinement should, whenever possible, be used in conjunction with the Is Replaced By refinement on the referenced resource.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.11 Is Replaced By

Attributes	Attribute Description
Identification	
Name	isReplacedBy
Label	Is Replaced By
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/isReplacedBy
Definition	
Type of term	Element Refinement
Definition	The described resource is supplanted, displaced, or superseded by the referenced resource.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification. The Is Replaced By refinement should, whenever possible, be used in conjunction with the Replaces refinement on the referenced resource.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.12 Requires

Attributes	Attribute Description
Identification	
Name	Requires
Label	Requires
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/requires
Definition	
Type of term	Element Refinement
Definition	The described resource requires the referenced resource to support its function, delivery, or coherence of content.
Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The Requires refinement should, whenever possible, be used in conjunction with the Is required By refinement. For example, to show the relationship between statutes and regulations.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.13 Is Required By

Attributes	Attribute Description
Identification	
Name	isRequiredBy
Label	Is Required By
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/terms/isRequiredBy
Definition	
Type of term	Element Refinement
Definition	The described resource is required by the referenced resource, either physically or logically.

Comment	Recommended best practice is to reference the resource by means of a string or number conforming to a formal identification system. The Is Required By refinement should, whenever possible, be used in conjunction with the Requires refinement. For example, to show the relationship between statutes and regulations.
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.14 Has Translation

Attributes	Attribute Description
Identification	
Name	hasTranslation
Label	Has Translation
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	The described resource has a translated version, namely the referenced resource.
Comment	
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.11.15 isTranslationOf

Attributes	Attribute Description
Identification	

Name	isTranslationOf
Label	Is Translation Of
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	The resource is a translation of the referenced resource.
Comment	
References	
Relations	
Refined by	
Refines	Relation
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Not Repeatable

2.12 Rights

Attributes	Attribute Description
Identification	
Name	Rights
Label	Rights
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/rights
Definition	
Type of term	Element
Definition	Information about rights held in and over the resource.
Comment	
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.13 Source

Attributes	Attribute Description
Identification	
Name	Source
Label	Source
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/source
Definition	
Type of term	Element
Definition	A reference to a resource from which the present resource is derived (in whole or in part).
Comment	
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.14 Subject

Attributes	Attribute Description
Identification	
Name	Subject
Label	Subject
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/subject
Definition	
Type of term	
Definition	A topic of the content of the resource.
Comment	Typically, Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Recommended best practice is to select a value from a classification scheme such as CoT_Thesaurus.
References	
Relations	
Refined by	
Refines	

Has Encoding Scheme	CoT_Thesaurus
Encoding Scheme for	
Constraints	
Obligation	Mandatory
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

2.14.1 keyword

Attributes	Attribute Description
Identification	
Name	Keyword
Label	Keyword
Defined by	
Term URI	
Definition	
Type of term	Element Refinement
Definition	Additional terms that describe the subject of the content which are not selected from a classification scheme such as CoT_Thesaurus.
Comment	
References	
Relations	
Refined by	
Refines	Subject
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	
Datatype	String
Occurrence	Repeatable

2.15 Title

Attributes	Attribute Description
Identification	
Name	Title
Label	Title
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/title
Definition	

Type of term	
Definition	A name given to the resource.
Comment	Typically, Title will be a name by which the resource is formally known
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Mandatory
Condition	
Datatype	String
Occurrence	Not Repeatable

2.16 Type

Attributes	Attribute Description
Identification	
Name	Type
Label	Type
Defined by	http://purl.org/dc/terms
Term URI	http://purl.org/dc/elements/1.1/type
Definition	
Type of term	Element
Definition	The nature or genre of the content of the resource.
Comment	Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary.
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a term is selected from a controlled vocabulary
Datatype	String
Occurrence	Not Repeatable

3 Encoding Schemes

The attributes in the following tables serve to identify, define, relate or constrain the encoding schemes referenced by the Descriptive Metadata Element set.

3.1 CoT_Organization

Attributes	Attribute Description
Identification	
Name	CoT_Organization
Label	CoT_Organization
Defined by	
Term URI	
Definition	
Type of term	Encoding Scheme
Definition	The organizational structure of the City of Toronto.
Comment	Used to populate Creator, Contributor and Publisher.
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	creator, contributor, publisher
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a value is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

3.2 CoT_Geospatial

Attributes	Attribute Description
Identification	
Name	CoT_Geospatial
Label	CoT_Geospatial
Defined by	
Term URI	
Definition	
Type of term	Encoding Scheme
Definition	Spatial entries valid for the City of Toronto.
Comment	Used to populate the spatial refinements of the coverage element

References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	Spatial, geoType, geoAddress, geoStreetName, geoPostalCode, geoWard, geoFrmmunicipality, geoName, geoidentifier
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a value is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

3.3 ISO 8601

ISO 8601. Complete date plus hours and minutes:

YYYY-MM-DDThh:mmTZD

where:

YYYY = four-digit year

MM = two-digit month (01=January, etc.)

DD = two-digit day of month (01 through 31)

hh = two digits of hour (00 through 23) (am/pm NOT allowed)

mm = two digits of minute (00 through 59)

TZD = time zone designator (Z or +hh:mm or -hh:mm)

3.4 ISO 639-1

Attributes	Attribute Description
Identification	
Name	ISO 639-1
Label	CoT_Language
Defined by	
Term URI	
Definition	
Type of term	Encoding Scheme
Definition	The language of the resource.
Comment	
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	Audience
Constraints	

Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a value is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

3.5 CoT_Thesaurus

Attributes	Attribute Description
Identification	
Name	CoT_Thesaurus
Label	CoT_Thesaurus
Defined by	
Term URI	
Definition	
Type of term	Encoding Scheme
Definition	City vocabulary of subject terms to describe the subject content of the resource.
Comment	
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	Subject
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a value is selected from a controlled vocabulary
Datatype	String
Occurrence	Repeatable

3.6 DCMI Period

Attributes	Attribute Description
Identification	
Name	DCMI Period
Label	DCMI Period
Defined by	
Term URI	
Definition	
Type of term	Encoding Scheme
Definition	A mechanism for indicating a single time interval using its limits and representing that information as a text string.

Comment	Components of the value string correspond to the start and end of the interval, either of which may be omitted in the case of a single-ended interval.
References	
Relations	
Refined by	
Refines	
Has Encoding Scheme	
Encoding Scheme for	Coverage
Constraints	
Obligation	Optional
Condition	The appropriate encoding scheme label must be included whenever a value is selected from a controlled vocabulary
Datatype	Date or datetime
Occurrence	Repeatable